DOCUMENT RESUME

ED 125 460 HE 008 033

AUTHOR Vinge, Clarence L.
TITLE Jobs for Geographers. Views by Members in the Profession.
INSTITUTION Michigan State Univ., East Lansing.
PUB DATE 75
NOTE 76p.

EDRS PRICE MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS Bachelors Degrees; *Career Opportunities; Career Planning; Doctoral Degrees; Females; *Geography; *Geography Instruction; *Higher Education; *Job Market; Manpower Needs; Masters Degrees; Minority Groups; Professional Continuing Education

ABSTRACT

How best can the employment opportunities of those trained as professional geographers (undergraduate majors and those holders of advanced degrees) be enhanced? This question, put to some seventy professional geographers associated with academic institutions, business, and government, resulted in answers involving: instruction, job hunting, the job market, job promotion, scholarship, business, government, teaching, women, minorities, and lifelong learning. (KE)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED125460

JOBS FOR GEOGRAPHERS

Views by Members in the Profession

A Report Prepared For The University During Consultant Year 1975

Clarence L. Vinge, Professor, Geography
Michigan State University

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

HE008033

ACKNOWLEDGMENTS

This report on problems associated with the employment of geographers was done under the university policy granting a year free of regular duties, a consulting year, prior to the retirement of eligible faculty and staff.

I am grateful to university administrators and especially to Dr. Lawrence Sommers for their helpful cooperation. I would also like to thank members of the department's secretarial staff--Sheila Hoeve, Debbie Gaffner, Emily Palmer, Judy Quinn, and Sharon Rochon; staff cartographer Christine Force and assistant Bill Maynard; staff photographer Don Batkins, and Marvel Lang, graduate assistant, who helped run down serial entries.

The respondents to my letters of inquiry did most of the work by being willing to share their thoughts in writing and I most sincerely thank each of them.

CONTENTS

Acknowledgments .. ii

Introduction .. 1

Administrative Support, a Function of Enrollments .. 4

Enrollments, a Function of Jobs .. 4

Jobs, a Function in Large Part of the Graduate's Character and Disciplinary Training .. 5
Principal Focus of Report, the Thinking of Profession Regarding Job Promotion .. 6
Points of View .. 6

The History Analog .. 6
Good Instructors, Good Students .. 13
Student Initiative in Job Hunting and Holding .. 15
The Graduate Experience--One of Intellectual Enhancement and Enthusiasm or Pedantic, Numbing Immobilization? .. 17
The Reluctance to Say "No" and the Yo-Yo Character of Standards in Relation to the Vagaries of the Job Market..18
Departmental Responsibilities to Student Beyond Course Offerings .. 19
The Library, Information Retrieval, and the Dismembered Corpus .. 23
Job Promotion--Advertising, Hucksterism, or Legitimate Activity? .. 24
Paradigms, Transgressions, and Scholarship .. 26
Pecking Order--Is It Related to the Job Market? .. 35
Applied Geography--Does Scholarship Necessarily Mean Detachment from Society's Problems? .. 36
Business and Government--Advice by Escapees from the Ivied Walls .. 46
Flying Under Different Flags .. 53
Public-School Geography--Poor Teaching or Structural Constraints of Curricula? .. 54
Women and Minorities in Geography--the Forgotten Ones? .. 57
Lifelong Learning--All the Geography You Need to Know by the Sixth Grade? .. 58
Why Talk Only to Ourselves? .. 59

Conclusions .. 62

Footnotes .. 63

Appendix--Letters of Inquiry, Names of Respondents .. 66

Introduction

To combat ignorance, to provide reliable knowledge, most university administrators and faculty would agree that this is, or should be, the primary objective of the university. And vistas of ignorance abound not only in humanities and soft sciences but in the hard and applied sciences as well.

In few of societal concerns with reliable knowledge have the deficiencies been more hurtful to the well-being of the nation, perhaps even to its chances of ultimate survival, than in regard to geographic realities.

For well over a century--since the days of rapid steam transport and telecommunications--many individuals have recognized the growing interdependence of the countries of this small planet. The "one world" of Wendell Willkie grew into the global strategies and operations of World War II and this, followed by a proliferation of massive global programs--private (as with the multi-national corporations) and government, both national and international. Unfortunately, the idealism of the early days of the Marshal Plan and Point Four dwindled to bloc psychology and cold war, perhaps inevitable in a world for the most part overwhelmed by illiteracy, myths, and poverty. In more recent years, we have seen a great nation, at great immediate and continuing material and human cost, pivot its entire foreign policy on a simplistic physical model of falling dominoes. Too often have national policies functioned as if the distance factor--time and cost--were of no account; too often have national policies functioned as if the natural-resource

base and even the cultural base of other countries differed only slightly from that of the United States.

Reliable knowledge brought to bear on international problems has been mainly through the individual academic disciplines. But this has been an approach of bits and pieces with the highest policy decisions made chiefly by individuals trained in the law and finance. "Other things being equal," the universals of the systematic sciences hold, but factors impinging on universals vary greatly from country to country; rarely have specialists been willing or able to step back in an effort to grasp the total panorama.

It is precisely this effort--to grasp Earth whole--that geographers have been attempting for more than 2000 years, presently an uneasy task in a society dominated by specialists. A well-trained professional geographer has had to gain a working, if elementary, knowledge of numerous systematic disciplines, this in order to understand the configurations and interconnections of natural and cultural phenomena, material and non-material, varying from place to place--geographic reality. In his studies of historical geography he has attempted to give a temporal perspective to his work. His most essential tool has been the map--realistic at large scale, abstract at small scale, scanty, hard-to-come-by field data in the early days to an avalanche from aerial photography and other types of remote sensing today.

A reasonable question frequently raised is this: geography appears to dib and dab in nearly all the disciplines, a kind of intellectual robbing--why not shut down the enterprise and

turn its responsibilities over to the numerous separate disciplines? The most persuasive answer was given some half century ago by Nevin Fenneman in his presidential address to the Association of American Geographers (1):

> Thus it seems that, with geography dead, all its tangible effects would be claimed by relatives and the estate would be settled up. To say the least, this is disconcerting. The case is not made better by the reflection that a large number of educated persons would see no reason for objecting to such a solution, provided only that geography were preserved for children up to the age when serious study should begin. . . . The obvious question arises: Would the decedent stay dead? . . . Assuming that after his decease each of the [disciplines] contributing to geography does its task well with respect to Russia, for instance, is there any likelihood that a craving would arise for a synthetic picture of the whole or a critical study of interrelations? If so, who would satisfy this craving, and who would paint the picture, and what would be its value or standing among scholars? . . . There is not one chance in a hundred that ten years would go by without a conscious craving, and an attempt to meet the craving, for a comprehensive view of the areal unit; and not one chance in a million that a century would elapse before such an interest would be the center of a new science. It matters no whit that all concrete data are already organized into the other sciences, each more exhaustive and more critical with respect to its own data than the new science; it is absolutely certain that interest in the areal unit as such would clothe itself in appropriate form.

Within the geographer's broad professional interest in territoriality many distinctive emphases (schools of thought, paradigms) have waxed and waned. Among others, these have included teleology, environmental determinism (a modified form of social Darwinism), morphology, and areal differentiation; at present the dominant theme is locational analysis and spatial interaction to which physical analogs, mathematics, theory, and the computer can all be readily applied. Contemporary interest in ecology and raw-material shortages will undoubtedly revive the earlier interest in forms of environmental determinism.

Administrative Support, a Function of Enrollments

The decades of plump budgets post-World War II appear to have come to an end. With money coming in from all directions, private and public--generous philanthropic donors, open-handed state legislatures, a liberal congress, even programs at the thinnest margin could be given support. Now and for a long indefinite time, accountability, cost effectiveness, cost-benefit will become the touchstones of academic policy. Academic huckstering will continue but become more difficult to pass muster.

It is certain that administrators will continue to defend and financially support programs based on philosophic rationale but it is equally certain that they will welcome something stronger, stronger in the sense of Stalin's question, "How many troops does the Pope have?" Enrollments--majors, minors, electives--give the administrator something of substance, demonstrated demand, to support the philosophic rationale of a discipline's contribution to reliable knowledge.

Enrollments, a Function of Jobs

This obviously is not completely accurate. Many enrollees are motivated by a genuine desire to learn for learning's sake; many are motivated chiefly to stay out of the cold and pick up a few easy credits. Yet for the great majority of students, the bright and the less bright, a continuing worry is what to do after college. However inadequately--not knowing themselves, poor advising, the dynamism of the job market--they will structure a course of studies aimed at future employment.

It is this argument that represents the basis of successful inquiry made of some seventy professional geographers associated with academic institutions, business, and government. The question briefly put was, how best to enhance the employment opportunities of those trained as professional geographers (undergraduate majors and holders of advanced degrees)? Response came in nearly even numbers from senior members of the profession (those in retirement and near retirement) and from younger members (graduates from the department in Michigan State University). Although senior members included many top scholars of the profession (five former presidents of the Association of American Geographers were kind enough to respond), the desire was not so much for advice persuasive because of authority as because of reason and logic. Copies of the letters of inquiry and list of names of respondents are contained in the appendix.

Although implicit permission was received to ascribe quoted opinions to specific individuals, it was thought for a variety of reasons that this might be unwise. And, again, the desire was to keep the focus on the advice rather than the adviser.

Principal Focus of Report, the Thinking of Profession Regarding Job Promotion

In the language of the market place, the profession has concentrated its attention, and properly so, mainly on the product, scholarship through the medium of a well-educated student, rather than product promotion. Of the national U.S. professional societies, the Association of American Geographers (AAG) and the National Council for Geographic Education (NCGE) have taken the greatest interest in job promotion. The AAG has been active especially in publicizing factual material, forecasting employment, and in trying to open more positions not only in higher education but also in business and government (2). Scan of the serial literature reveals relatively few articles directly concerned with job promotion (3).

Points of View

The History Analog

Few disciplines are so closely akin as geography and history. Both are interested in the total spectrum of reality but each uses a different prism--geography the spatial dimension, history the temporal dimension. History has established itself as perhaps the principal component of a liberal, humane education; its scholars command a very large audience of lay public and most powerful of decision makers. Despite the likeness of problems--both disciplines grappling with vast quantities of heterogeneous data--history, at least as judged by its demand in the form of degrees conferred, has vastly outpaced

geography as well as many other disciplines, including economics and geology (Figs. 1, 2, 3). During the last quarter century, more precisely 1947-48 through 1971-72 in U.S., bachelor's degrees conferred in history exceeded 500,000 compared to less than 40,000 in geography; master's degrees 66,000, about 8,000; doctor's 12,000, less than 2,000.

Why the lopsided vote? Granted that vicarious experience is one of high priority, does not actual experience presuppose not just the temporal but all four dimensions of reality? Perhaps the voice of authority and wisdom is more readily accepted when listener finds no direct way of transport back to scene of action. More important--the historian has been able to invest his studies with the most universally interesting of all objects--specific people as fallible, hopeful, despairing individuals; in contrast, geography has taken the sociological route--man in mass, faceless, to be divided into sets and subsets and a sure formula of draining away most human qualities.

The similarities of history and geography bespeak of geography's role in a liberal education and several respondents took strong positions on this issue.

*

Certainly history is a flourishing academic discipline, measured either in the size of its university faculties or the numbers of students taught. History is academically popular even though employment opportunities, outside of schools and colleges, are relatively small. Yet, while geography and history are similar in that both lack a readily recognizable corpus of knowledge, of the two history has a far greater appeal to the general reading public. How an individual, a community, a nation, or even the world, has evolved through time has great attraction, in part no doubt because history deals with people, their thoughts, and their accomplishments and failures. Biographic history is one of its most popular subdivisions. In

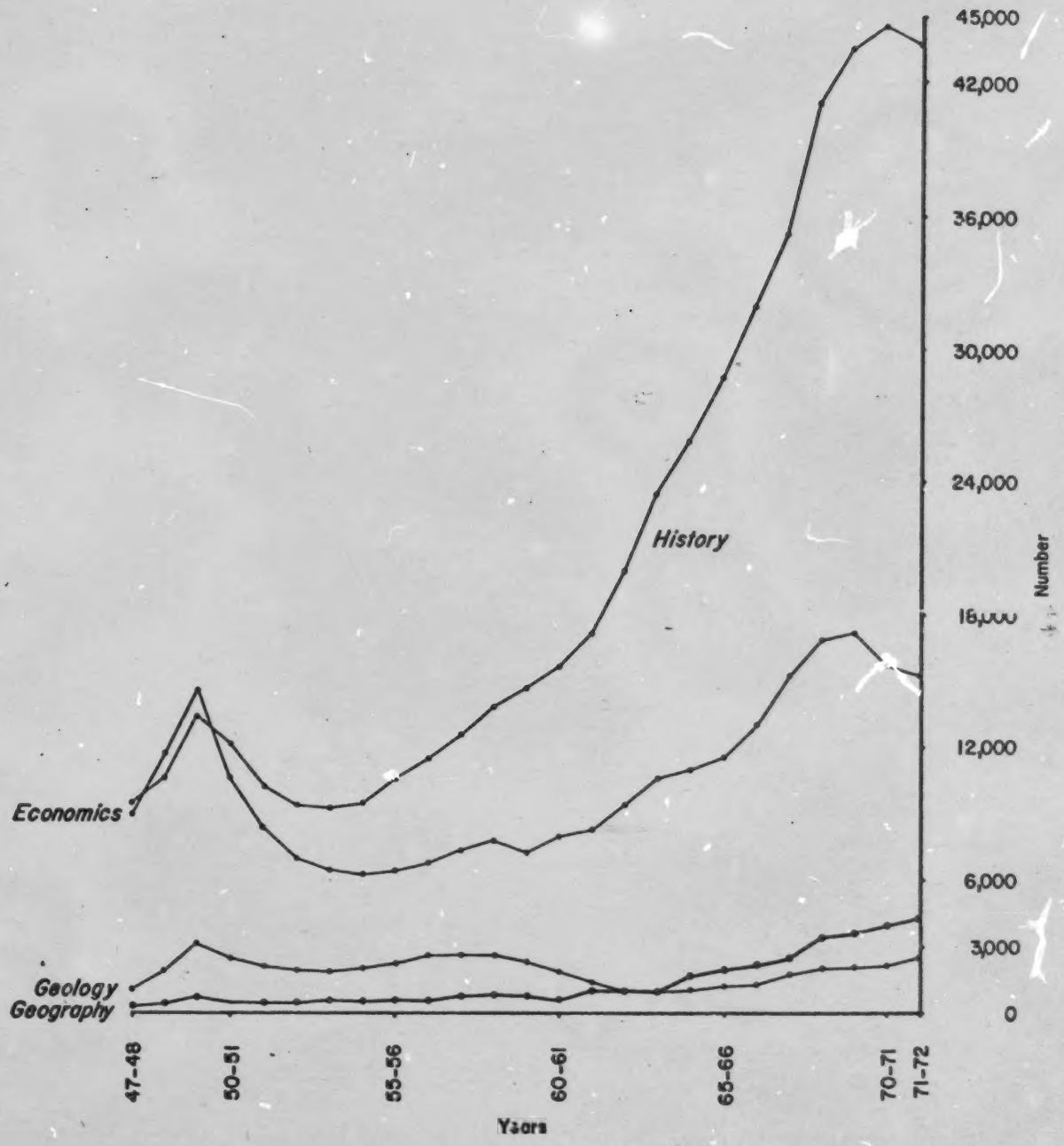

Fig. 1 Earned Bachelor's Degrees Conferred by Institutions of Higher Education, U.S., 1947-48 through 1971-72 (50 States and D.C.). U.S. Office of Education data.

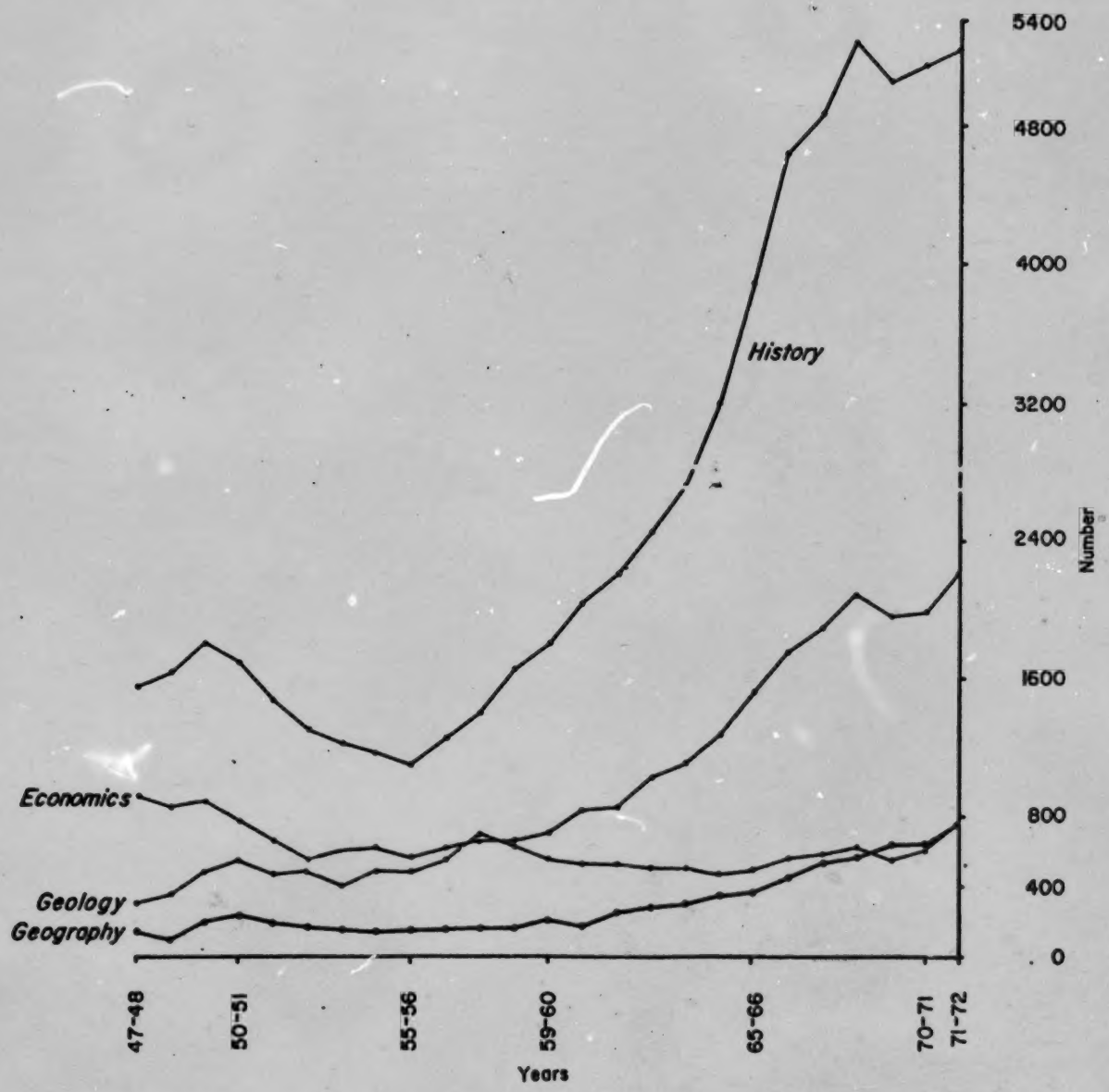

Fig. 2 Earned Master's Degrees Conferred by Institutions of Higher Education, U.S., 1947-48 through 1971-72 (50 States and D.C.). U.S. Office of Education data.

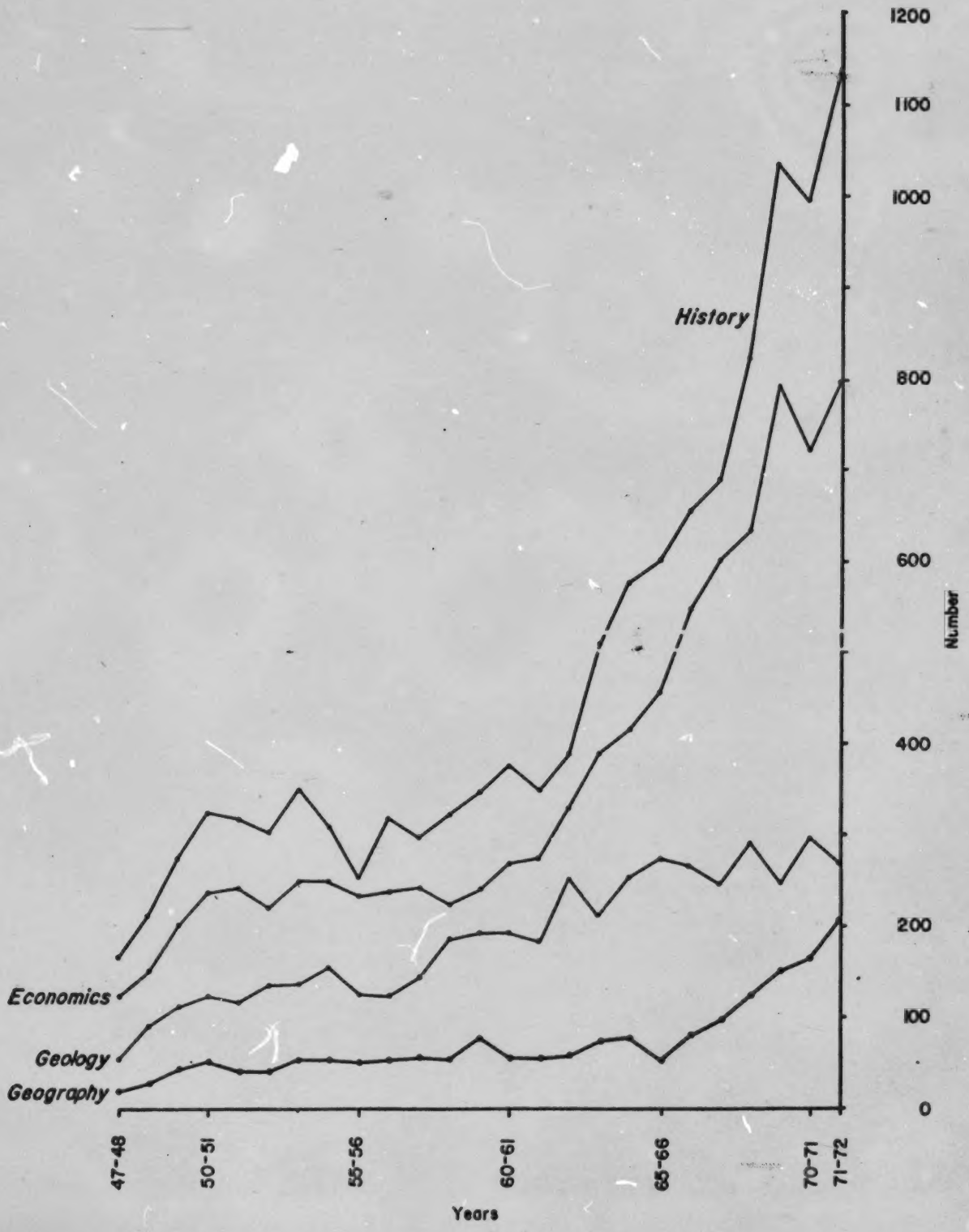

Fig. 3 Earned Doctor's Degrees (Ph.D.'s) Conferred by Institutions of Higher Education, U.S., 1947-1948 through 1971-1972 (50 States and D.C.). U.S. Office of Education data.

contrast, geography, which emphasizes location, distribution and character of places, usually by means of statistical abstraction, does not have the same universal appeal. Napoleon Bonaparte and Thomas Jefferson have each been the subject of scores of histories, but one, or at most a few, geographies of France or of Virginia will suffice. As a geographer, I find that I read a great deal of history, and just for pleasure; I confess to reading little geography for the same reason.

*

Geography has a place in a university curriculum along with history, political science, and other social sciences as a subject which adds to the student's understanding of the world around him. Why should geography be rejected simply because a graduate who is a major in the subject cannot immediately step out into society and line up a good job. He all the better appreciates an elevated position in life just as a major in history or another social science subject. Geography makes a marvelous background for an innumerable number of avenues in a young person's potential to enter a profession. The subject infiltrates a wide variety of professions as background and the alert student can put it to use. Yet I've not known many professors who stress this aspect. What better background than to know something about the world?

*

There is widespread confusion in America between the two purposes of education, education for personal living, and education for a vocation. . . . The shift of emphasis in this country, from the first, its basic standpoint, is deplorable, and arises from the lack of insistence on the core of training in geography as a distinct regional discipline. The shift to regional science, quantitative analysis, etc., is far removed from the long tradition of geography. I have met more graduate students (let alone undergraduates) who have not the faintest idea how to handle and interpret a topographic map, or depict in the field the countryside (or townscape) around them, tho' the chances are they could babble about regression curves and the like. What is needed at both undergraduate and graduate levels is strict and regular disciplinary training in the distinctive expertise of geography, which is far removed in the spectrum from regional science.

*

I am convinced that we should not be in the business of training students for jobs. We should be training good geographers. Vocational programs belong in professional schools or technical training centers. The most undesirable route is to fill an M.A. program with technique, or how to do courses. Its been my experience that these programs do produce students who know "how to do," but they don't know "what to do." Techniques come and

go, employer demands come and go, and that means an overall departmental emphasis will also come and go. . . . It seems extremely short-sighted to respond to job markets with a sort of band wagon approach. I don't think a department, even a large one, should create too many new specialized areas of interest. Producing good geographers is the main goal.

*

Career and circumstances have taken me rather far away from active study of geography in a professional sense. Nonetheless I am still very much influenced in the way I look at the problems of life and my work by the rather unique perspectives one gains from studying and loving those things one can learn about in geography. The great strength of geography as a field of study is its tendency to fulfill many if not all of the goals one might list for liberal arts education [but] I am afraid though that the lack of specialization that goes with this virtue is a major obstacle to getting jobs other than those few that require a geographer. Geography is a thing of the heart, I think, for most of us, but we can't all earn our living from our true love. Close then is better than far away.

Strangely enough the enrollment contrasts between geography and history evoked little sense of concern.

*

May I recommend a change of attitude which expressed a feeling of inferiority in numbers of graduates compared with history or any other subject for that matter. History occupies an entrenched position in the curriculum, and geography (despite its position in antiquity) is a newcomer to the American curriculum at the higher educational levels--less than a century in fact, and during the first half of that century geography was interpreted mainly as physiography, right down to my own time under William Morris Davis.

*

There long have been, and still are, far more history departments than geography departments. Often they are bigger than ours. Of course they turn out more people. What do historians do? A few teach history; most history students are merely getting a liberal education. So do some geographers just get a liberal education, doing all kinds of things thereafter. Just as liberally educated historians do all kinds of things afterward, so do some geographers. All to the good. Why worry whether we are as numerous as historians?

*

People are not going to take courses unless they can lead them

to a good living when they graduate. If a survey were made of those who major in history, the survey would probably show that many undergraduates went into law. In fact, at Georgetown it is suggested that anyone going on to law should major in history. By doing this type of advertising history is surviving. However, when you say to someone you are majoring in geography they more than likely will ask you why. Unless students are informed that they can make a living and a good living at that, they are not going to take geography.

*

We should remember that there is a certain comfort right now in being outrun by history; as a consequence history has a more difficult job placing graduates.

*

The major difference between the number of majors in history and in geography is because of the generally poor teaching of geography in the primary and secondary schools. In the extreme case, people are teaching geography who have never had a course at the university level in the field.

*

I don't understand your statement that we compare badly with history. History is a disaster area for employment. You indicate that enrollment in history in A.B., M.A. and Ph.D. levels is far greater than in geography. This of course is absolutely correct. However the problem in history is that they have vastly overproduced which is not the case for geography. Over-production has been a perennial problem for history and recently the problem has become much worse as the job market for teachers at all levels has decreased sharply. Currently enrollments in history classes are dropping sharply across the country and the American Historical Association has been suffering from declining membership, declining attendance at their annual meeting, etc. On the other hand geography has not been experiencing placement difficulties in a severe degree partly because we were not overproducing for a long period of time but also because geographers can find employment more easily than historians in business, government, and planning.

Good Instructors, Good Students

Of all the factors related to the success of geography none is more important than the quality of the teachers and the students.

*

The quality of instructors will affect all other factors. . . .

The "mediocrity breeds mediocrity" syndrome has been a major stumbling block for geographers and geography. The question then becomes what makes a quality educator. Obviously, the answer to such a question could be of dissertation length, but I would think that such an individual could ultimately be evaluated on his ability to inspire his students to do great things. It would seem relatively simple to ask, "What have the students of X professor done to enhance the image of geography and geographer?" The more difficult question is then, "What qualities of 'professorship' made Y professor's students so successful?" . . . High-quality geographers will seek ways to make geography practical for their students. Each course should have a definite educational goal in mind. Each course should have applicability to a specific activity. Without this practicality, the student not only will have trouble relating the course material to himself, but he will also have difficulty in marketing a useless skill. The good instructor will show his students the utility of the education they are receiving. The poor instructor's courses tend to be labeled as so much "Esoteric B.S." or full of "nice-to-know, but useless information." Each lesson in each course should build to the ultimate utility of the course material. With a clear goal in mind, the student can build his geographic education to fit his career goal. . . . Only by becoming known as a "group" of highly skilled professionals can geographers overcome the stigma of having rank amateurs in our clan. The more geographers can do and the better they can do it will "sell" geographers better than any poster campaign that could be initiated.

*

The best teachers should be used in beginning courses.

*

I think many of our university geographers have been intellectual snobs, caring little about what happened to their graduate students, other than those following in their footsteps at the college and university level.

*

Looking for the best geographic educators is just the first step in quality-raising process. You must also seek highly skilled students. This should be done on a highly competitive basis not only at the graduate level, but also in undergraduate education. Marginal performers should be discouraged from taking a program which will demand more of them than they can give. The obvious corollary is you may now demand more of those left in your program. An active recruiting (or whatever name you give it) and selection program is mandatory at all levels if the quality of geographers and geographic education is to rise. . . . If a student has no idea of what he wants to do with his

geographic education, he should not be in the field.

*

Fortunately, our people are a distinct cut above the university norm at both levels (B.A., M.A.). Phi Beta Kappa has initiated three of our undergraduates in the past two years, we have the only student NSF Fellow at the university, and Gamma Theta Upsilon has awarded their annual scholarship to one of our students two of the past three years.

Student Initiative in Job Hunting and Holding

Even the brightest students are handicapped if they refuse to be presentable, personable (humane), and willing to take seriously the notion that the world has not been awaiting their arrival. Formal credentials help, individual drive turns the corner.

*

I wish to come at your questions solely from the point of view of student preparation, believing as I do that in the main the entrance to a particular firm depends on the man available rather than on a sales talk from the university.

*

The trouble with geographers is that they want to sell themselves on the basis of being geographers not on the basis of ideas; I say--forget about identification with a discipline. The general approach should always be what I can do for the potential employer. What is the job all about? Then, with such information, the problem is: What ideas might I have regarding my ability to contribute to their objectives? Forget labels, come up with ideas. To do that, one needs to know what ideas are pertinent. This takes study, imagination, professional competence. People do not hire people. They hire ideas. It is useless to try to sell geographers to people who are unfamiiar or do not have an understanding of what the discipline has to offer.

*

Now, I tell finishing graduates: pick a big company. Find out what it does--particularly what it does that you can do. Then,

do not go and simply ask for a job as a geographer--the personnel manager (or administrator) will not know what you do by the word geography since to him Mt. Everest is so high and his company already knows that. Go talk to the personnel manager about things the company does that you can do and then apply for a job. In a big outfit, if you do well, you will create places for others.

*

We should send out graduates to state agencies, planning commissions, or wherever and let them knock on doors. Most importantly, these people should have a piece of their work tucked under their arm to show the prospective employer. This procedure has worked for us.

*

My actual search, however, began before graduation. I visited the Placement Center and became familiar with the large amount of material they had available regarding government and private sector jobs. One should always keep alert for potential employers who advertise in unexpected places. Since my specialty was mapping and remote sensing, I found some who advertised in Photogrammetric Engineering; also in the Michigan Township News (a publication received by township officials). I consulted departmental bulletin boards--perhaps the ultimate in serendipity was the discovery I made on one of the bulletin boards in the Natural Science Building--a postcard asking for information by the National Oceanic and Atmospheric Administration in Rockville, Md. The spin-off from this discovery is that I am currently employed by NOAA as a cartographer.

*

In January 1974 I began sending out résumés and letters of inquiry to prospective employers. I concentrated primarily on private firms and government agencies which were engaged in remote sensing or resource analysis activities. I also advertised in JIG and in Photogrammetric Engineering. The response was not very encouraging, but a few letters of interest did come back, including a promising one from the Engineer Agency for Resources Inventories of the U.S. Army. I followed through on this lead and was encouraged enough by it that upon completion of my degree in June (M.A. with emphasis in geomorphology and remote sensing) we moved to the Washington, D.C. area. While I waited for the wheels to turn in the Civil Service Commission I worked as a salesman in my father's retail store and half heartedly looked for other employment opportunities in the area. Finally, in early October 1974, I was told that there was an indefinite freeze on hiring in the Department due to cutbacks in Federal spending. At that time I resumed job hunting, particularly in the remaining applicable government agencies and in the local aerial photography and cartography firms. Nothing

positive came of these inquires. Then, in December, I received a call (unsolicited) from a friend who works with the Department of Natural Resources of the State of Maryland. He knew of some possible openings in the Coastal Zones Management Program, which is a Federally funded agency born out of the Coastal Zone Management Act of 1972. Again I applied, was interviewed, and waited. Fortunately I had someone inside working for me, and the processing was pushed through quickly to avoid losing the position to budget cuts. However, the specifications for the position, Natural Resources Planner II, do not recognize geography as a qualifying degree. I was eventually hired in the temporary classification of Skilled Laborer, with the pay and benefits of a Natural Resources Planner I. The specifications for NRP's are now being rewritten to include geography degrees with appropriate course work, and when that is done I should be given a permanent position. In the meantime I have the duties and responsibilities of a NRP II, and am gaining valuable experience.

The Graduate Experience--One of Intellectual Enhancement and Enthusiasm or Pedantic, Numbing Immobilization?

The adventure of learning--is it always so? The depressing stories told by Studs Terkel in Working may find more counterparts in the academic community than we are willing to admit. Certainly it is true that there are many instances of bright, curious young people whose intellectual progress and potential contributions in later years have been aborted, sterilized, by five or six or ten years post-bachelor's on their way to the doctorate. Delaying economic adulthood until the age of thirty seems a tragic waste of talent.

*

. . . . the process of training graduate students: as professors we have a great influence on the kind of people who leave us. Unfortunately, in my opinion, too frequently we are only concerned with what they know in geography, but later success or failure of these people usually is not simply a function of what they know in geography but rather what kind of people they are, how well they understand and apply a process of learning, how they interact with other people, etc. All too frequently

the graduate program is a dehumanizing experience and a person leaves with a feeling of bitterness, a shaken confidence in self, and exhausted, rather than a new enthusiasm for learning, a new confidence in self, and feeling good about that which has been accomplished. This sort of thing, in my opinion, makes a difference in the kind of job opportunities one perceives and how they do on the job. So, it is this sort of thing which I think to be awfully important in a graduate program.

The Reluctance to Say "No" and the Yo-Yo Character of Standards in Relation to Vagaries of the Job Market

During the flush years of employment opportunity (virtually the entire span 1945-70), graduate standards were lowered to increase the flow of graduates--terminal tracks at the master's level, dropping of language requirements, weakening of oral and written examinations. These facts are recited not in criticism of those who received degrees during this period but rather as criticism of the professors and administrators who perceived this course as the proper one to meet the market needs. Now, apparently, the reverse is to take place--tighten the standards, stretch out the time, delay movement into job market. Should elasticity be the principal characteristic of standards? Might not it be better to establish high standards, stick to them, and allow the students, proffered advice, to make their own appraisal of the job market?

*

. . . best hope may be drastically reducing output. But for those already committed, developing and demonstrating professional competence in non-academic pursuits looms as a viable solution. Their models must be both geographers in business and government <u>and</u> the learned and eclectic scholar.

*

. . . limit the number of degree candidates to something

approaching the potential demand.

*

We may have trained too many geographers.

*

. . . department has a moral responsibility not to encourage more people to enter the discipline than can reasonably expect to be employed.

*

I do not crave for geography a large-scale expansion. As of the moment the academic market for geography appears to have approached near satiation, and with the forecast of declining college enrollments ahead, the future market for geographers may not be too bright. Non-academic employment for geographers has never been good, and I see no reason for expecting it to expand sharply. If these surmisings have any validity, then the growth in numbers of geographers should be slow.

*

One suggestion frequently made is to reduce the number of majors. This probably makes good sense at the Ph.D. level because of market conditions and historical opportunities, but I think it can only be to our long-range detriment to impose such Neanderthal thinking on beginning graduate and undergraduate students.

Departmental Responsibilities to Student Beyond Course Offerings

A stimulating scholarly atmosphere, the chance as an individual to study with gifted professors, conditions favorable for students in twosomes and larger groups to work over the discipline and the state of the world--these and many other opportunities should be provided by the department. The judgments and advisories that follow focus primarily on the responsibilities of the department with respect to jobs. Intern programs are discussed in the section on applied geography.

*

A significant contribution toward enhancing the average undergraduate's employment opportunities would be to make the student more aware of the variety of professional options within business and government.

*

Perhaps the 'first' thing the department could do with incoming graduate students would be a conference which would 'level' with the student about job opportunities, where they are, types, salary to be expected, training required. . . . I believe I could have been better advised when I accepted my first position. . . . I do not accept the notion we can blame the 'views of geography held by those who do the hiring. . . .' With a little broader view of education on the part of those doing the advising (and responsible for a person getting his or her degree) the employment problem would be greatly reduced and the range of jobs greatly expanded.

*

I seriously doubt with the exception of the teaching profession and planning that the departments of geography have tried to place people. Traditionally we have assumed that people find their own employment.

*

Personal counseling by professors is often last of the list of duties. I would maintain that career management is a prerequisite for producing geographers with marketable skills. Without the proper counseling, this is often a hit or miss proposition.

*

Over the past several years, this department has employed a retired geography teacher on a half-time basis. His job was to assemble information on employment opportunities, to counsel students and to arrange interviews with visitors on campus. His efforts supplement those of the university's placement center and students value them very much. He is particularly valuable in helping students get part-time summer jobs which frequently lead to permanent positions after graduation.

*

For nearly twenty years, I was the member who helped graduate students find jobs. That means, in a sense, that I have been concerned with job opportunities almost all the time since the post-WWII Ph.D.'s became the stream of supply.

*

We bring prospective employers into the department to give lectures on their professions and we take students to prospective employers for demonstrations. We circulate curriculum information to the placement service and to whatever prospective employers willing to take the time to listen. We scan the want-ads columns in the Sunday papers of Chicago and collect those listings for employers in fields related to our course offerings; we inform particular students of specific openings. . . . We attempt to package departmental materials in a manner which we expect to be most relevant to the anticipated reader.

*

. . . I am sorry to say that most of our students must find employment on their own with little or no support from the faculty. We as professionals should make more of an effort to contact potential employers of persons with geography training and maintain such contacts from year-to-year by writing to tell these individuals or companies that the department has some well-qualified graduates who are interested in the particular type of work in question. A colleague of mine has contacted several planning agencies and landscape-architecture firms with an outline or program of courses which could be taken by our students, and has asked these firms if they would hire a person with such a background. The overwhelming response has been, "Yes, but I did not realize that such training was offered in geography!"

*

From personal observations, the maintenance of liaison with previous students has improved the employment chances of present students. Keeping these people in touch with the activities within the department seems to help.

*

As for opportunities in private enterprise, I strongly urge the department to take an activist attitude toward searching out job opportunities in the area. Surely the large companies doing business in the area have work available that geographers can perform; they simply do not realize it. The student himself will probably have a hard time selling himself to some of these companies due to the lack of knowledge about geography by persons in hiring positions. It seems to me that faculty members should be establishing contacts with local industries in an effort to keep informed of job openings. . . . It is a question of contacting the right people and asking them to keep departmental majors in mind when they are doing their hiring. This is something that individual students probably cannot do effectively. It is, however, something that the department should be doing. I am not sure how the department can go about this. Perhaps a conference of personnel directors of local industries could be held at which various displays could be arranged to

illustrate the diversity of the discipline. Perhaps a mobile display is in order that this information can be taken to the doorstep of the various personnel managers in the area. . . . One further point. Money is available for research. . . . Someone, be it a grad assistant or faculty member, should be assigned the duty of keeping on top of research-grant opportunities and keeping in touch with money-granting institutions. Finally, I hope that the department will become just as interested in placing people as it is in educating them, and placing people means more than just writing letters of reference.

*

We must keep better records on our students after graduation and keep lists of their employers.

*

It might be beneficial to compile a list of "friends of the department" now working in the state and federal governments and seek out their ideas.

*

. . . faculty contact with non-academic organizations in business and government is useful in the placement of graduates. To my knowledge, however, academic geographers are rarely evaluated in this area when it comes to promotions or salary increases. This is most unfortunate. If every university geographer were also a paid part-time employee of some external organization, I believe that such contacts or pathways would broaden the understanding of geography and that the world 'out there' would come to know us for the diverse and skillful lot which we are. . . . In sum, it seems important to me that the faculty be encouraged and rewarded for developing consultantships, advisory capacities, or other part-time functional relationships with the outside world.

*

It is the responsibility of the geographer at the university level to become active in the community. We tend to expect the community to bring problems to us and then pay us to solve them. We should be providing this service. I suspect that if we did we would increase our contact with those in business and social services and change the image that they have of us. It is simply the 'grass roots' approach.

The Library, Information Retrieval, and the Dismembered Corpus

Under the Dewey Decimal and Library of Congress systems of classification nearly all scholarly books written by professional geographers find a resting place on the shelves and identity in card indexes not in spatial propinquity but scattered among and included as part of the productive output of other disciplines. To the extent that this diminishes the stature of geography in the scholarly community, to the same extent, one may argue, are we hurt in the market place. Alfred Meyer (4) and others have suggested adaptations of the dominant systems to bring spatial coherence to the geographic literature but with little acceptance. Even as we move toward computerized retrieval, the problem of classification remains.

*

During WWII a geographer made an appointment with the head classifier at the Library of Congress and presented to him his list of worst 10 mis-classifications of geographic works (Economic Geography as economics, the Climate of Chicago as history, etc.). The list was dismissed with this remark: "If we classified books around Geography all this Library would be G--forget it, G gets the leftovers and that is the way it has to be." Not a happy state of affairs, but true, I am afraid.

*

Over some 45 years of college teaching, it has been my observation that the training of professional librarians tends to skip anything remotely related to geography. I am not referring to the special case of the map librarian, but to those in public or university libraries who are faced with daily requests for information that he or she must obtain from maps, gazetteers, geographical journals, or atlases. Most of them are not aware of geographical source materials or geographic literature, and they handle such requests poorly.

*

Mitigation of the problem raised in the second quote has been made by the excellent work of Nordis Felland, Roman Draznowsky, and Chauncy D. Harris (5).

Job Promotion--Advertising, Hucksterism, or Legitimate Activity?

Many geographers treasure their professionalism and feel active promotion of their wares in the market place demeaning. As the legal and medical professions move toward a more open approach to their respective markets, perhaps other professions will be encouraged to follow their lead. During the last several decades the economy has experienced a strong "technology (supply) push," rather than a "demand pull"; despite alloyed blessings, "supply push" seems destined to continue and the geographic profession will probably be forced to move in the same direction.

*

Acceptance and demand can be attained only by provision of a useful product, not by advertising.

*

It seems essential to educate the public, particularly potential employers, to that which geography has to offer. However, to me this part of the task appears nebulous, exceedingly difficult and, at best, long range. Perhaps it is too idealistic to anticipate that well-trained geographers can succeed and that their success is the best remedy for the profession's employment ills. Yet, to me, adequately training and preparing geographers seems a more direct and immediately rewarding role for the department and university.

*

Geographers themselves must provide the leadership to create employment demands by demonstrating a need in society for their skills, the discipline, and themselves. This is a vexing problem made more difficult when only eight per cent of college graduates have been exposed to one course in geography. Thus, with a basically geographically illiterate population including businessmen, journalists, government officials and other educators, geographers must develop communication methods to make target individuals and groups more aware of the skills and contributions geographers have and can make in improving local and world conditions.

*

In general, opinion favors your suggestion that geography has failed to sell itself--to the "right people" and to the general public. . . . Folks seem not to know what geographers can do or what they are supposed to do.

*

Again, I think we have to go to the "consumer" and demonstrate that we have something he can use. We spend too much time telling one another how valuable geography is but everyone else still thinks we are only interested in the longest rivers, highest mountains, and the fact the rice doesn't do well in deserts. . . . We cannot sit in our department meetings and decide what we will offer, in a buyers' market you have to find out what your consumer will accept.

*

Develop a stronger PR program--perhaps involving a professor half-time and/or several grad students to personally contact industries, business and government officials to explain training programs and the services that geographers can perform.

*

Further, we must be more outgoing and aggressive in communicating through the news media, particularly radio, television, and news magazines, about the availability of geographers in the job market.

*

The effort to educate potential employers should be aimed not at personnel officers, since they only interpret establishment guidelines. The focus needs to be on the administrators of potential employing agencies. They can best interpret their own needs, and they are usually the ones that have the authority to manipulate the position requirements.

*

As far as I have been able to discover, I was the first geography Ph.D. ever employed in an educationaloor any other operation in the state. When I got here, there were opportunities to place geography in both the physical science and the social science curricula of Arts and Sciences, to meet certain core-requirement options, and we immediately took advantage of these. We then went to work to "penetrate" the curricula of Business Administration and Education with both physical and social science basic courses--successfully; after that, we got into the core requirements of Forestry and Journalism. <u>All of this was</u>

a salesmanship job--it amounted to sitting with key faculty people in the various schools and explaining to them in some detail what was involved contentwise in courses that have value for their students. It also meant getting to know these people well enough to be able to deal with them on a friendly basis. While I did a great deal of this myself, our whole staff at that time deliberately worked at it; it was by no means a one-man effort. We found that our acceptability across the campus rose in accord with (1) the quality of our teaching and our accessibility to and concern for students as individuals; (2) the level of concern we exhibited to faculty elsewhere about their students through continuing contacts such as notifying them of inferior and superior performers regularly, of students in trouble, and particularly by doing our damnedest to take care of their students whenever enrollment problems emerged at registration (such as blocking off lab sections at preferred times for Bus. Ad. and Forestry, to insure their ease in making student schedules); (3) we worked like crazy at our own research and soon emerged as one of the more active research departments on this campus and among geography departments nationally. This helped immeasurably with faculty colleagues and administration for obvious prestige reasons. . . . I think what I've said above amounts to this: perceive all the possibilities, develop the personnel and curricula to capitalize on them, develop and exploit personal contacts, produce the "goods of the realm" at an academically superior level in classroom and research, don't be complacent, expect to work hard and don't be easily discouraged. When good students show up, their long-term growth and long-term support of them can be critically important because, later, the good ones show up in key places. Superior, hard-working colleagues and a supportive administration make a lot of difference. There are no "materials" that say how to do it, and no formula.

Paradigms, Transgressions, and Scholarship

Few would deny that the historical tradition of professional geography is one of almost cosmographic breadth but shallow depth. This cosmographic effort stands in contrast to the specialization characteristic of most other disciplines. Except for top-level decision makers, who of necessity must play the role of generalists, the largest rewards (money, prestige, power) go to the specialists. Under these circumstances it is little wonder that the profession has been surfeited with

paradigms, schools of thought, emphases; almost every year the profession receives another shot in the arm prescribed to cure the ills by in some way altering, usually narrowing, the focus; unfortunately the narrowing of focus frequently brings into view something no one else wants to study or something already appropriated. Shifting paradigms, although not entirely unique to geography, pose difficulties not only for the profession but also for the geographer's potential employer.

*

On the whole, I accept the mousetrap philosophy: do a good job and you will be sought out and imitated. I have no use for articles which spend most of their time talking about what "geographers" have done, are doing, and especially should be doing.

*

Neither our academic colleagues nor the general public know with certainty what professional geography is all about and the fault, I believe, lies with the geographers themselves. We have been guilty of shifting our definition and point of view too often. Early in the 20th century geography was a study of the influence of the physical environment upon human affairs; somewhat later it assumed the catchy definition of "Geography as Human Ecology," and that was followed by geography as "The Morphology of Landscape." The concept of geography as the science of areal differentiation had its early adherents, to be sure, but it seemed to reach its heyday at about mid-century, after which time it had to divide the laurels with a geography carrying at its masthead the flag of terrestrial distribution. No wonder our academic colleagues as well as the lay public are confused.

*

The broad training of a geographer and his ability to integrate and synthesize a wide variety of information remains as our unique contribution. We should think carefully before we change our emphasis.

*

The geographer is a "generalist" who must be familiar with many fields in the physical sciences, and he must also be able to understand what historians, economists, and sociologists say.

*

The "wise generalist," to be wise, must have basic understanding of the natural and social sciences. If I need help on a foreign project of development I want a wise generalist, also with a grasp of the relevant sciences for the job.

*

Yes, there is a growing appreciation of the good generalist, but we have no corner on that field. Maybe a good generalist is better if he has first been a specialist, learned some things better than others, had specific experiences on which he can draw? I like to think that a geographer with sharpened awareness and experience with the real world--the practical world of slums, farms, foreign lands and cultures--has his or her own special contribution to make that even transcends theory and is likely to be of greater utility, as a reference or base point.

*

I observe that praise goes to the generalist, but jobs to the specialist who can develop into a generalist. Over and over I note that these questions calling for general knowledge and wisdom are channeled to the specialist. I shudder at the answers they give, but that is how it is. If there is a lesson, it may be this, that the wise young man will have a double major--a firm narrow practical specialty and an equally firm broad grounding in geography.

*

In a world of specialist disciplines the geographer does have a problem, no question. But what of that? If geographers would speak up on issues they do know about, then they can make their presence felt.

*

The latter-day emphasis on disciplinary colleges, at the same time that administrators want more inter-disciplinary activity, is a contradiction in terms.

*

Geographers all used to be out of the earth sciences except for a very few strays. Now we get them from all over the lot. In that geography ranges more widely than any other single discipline, then we will continue to be all over the lot, the lot being the surface of the earth as occupied by the human race. . . . Our problem is not to find some narrow "slot"--if any august body defined that as geography four-fifths of the geographers would leave for some other discipline.

*

Another problem we face is that we are a hybrid subject--some of us prefer to work in marginal fields such as place names; some encroach on the field of economics; others are interested in reconstructing past geographical conditions. In other words, the borders of geography are poorly defined. I recall that I have heard geographers refer to Carl Sauer as an anthropologist because of his extensive research and publications on Mexican archeology and anthropology, yet many of his students--Hewes, Clark, R. J. Russell, Zelinsky, Dicken and Brand to name a few --have been pace-setters in geography, not anthropology.

*

Geography has been good to me because it let me work at things that interested me.

*

I don't think it will do one bit of good to pick some strange name, at this point, like Geonomics (as has been proposed). If we are lost by now, we are lost and no "narrowing" or "naming" is going to help us one damned bit. What we have to do is to work <u>out</u> from our own discipline <u>into</u> the rest of things.

*

It will help immensely if we can change our image to one of serious scholarship rather than one of game-playing with irrelevant topics.

*

Perhaps more emphasis should be placed upon the spatial aspects of the geographer's approach to the man-earth relationship which distinguishes the geographer from the sociologist, the anthropologist, or the economist--that geographers are the people who deal not only with how and what but also where and the relationship between where and elsewhere.

*

I am convinced that we have not trained people for activities in the field of geography. This results primarily from the humanities approach which once popular is no longer appropriate. Geography must emphasize that it is a social science. Our students need training in the techniques of spatial analysis. Here in the Southwest the trend of higher education is toward technical type degrees.

*

In my mind the only way for geography to go is to demonstrate the applicability of our spatial theory and the wisdom that we have gained through the years of environmental analysis. . . . We should see our courses as an introduction to the role of space in our lives. We should serve notice on the policy makers of the Western world that they are absurd in planning as if space doesn't exist.

*

I think the quantitative revolution in geography is here to stay. . . . Geography has had a hard time establishing an identity, and now it has got spatial interaction, with all the bona fides of mathematical models to support and reinforce it. Spatial interaction just doesn't "belong" to any other field. It's the new battle flag and rallying cry. I think in another 10 or 15 years it may be the core of geography. All of this worries me a bit, because the charm of geography to you and me and to lots of other people was the fact that it was unstructured. And it may get too structured to suit me. But I'm going to retire in five years, and I've had a good time with geography. Projecting--as though I were just starting in the field--I think I'd like to see geography legitimized, structured, bolstered by mathematical thinking, etc., because the science lacks credibility as it is. Well, as I have said, I think that's what is going to happen. Old Cristaller started it, and the birds in Great Britain have flooded the market with their books. So it's just a matter of time. . . . Actually, my interests are in this general direction--but not this specific direction. . . . systems analysis may be even harder to sell than spatial interaction!

*

I think that the geography curriculum in a lot of schools needs bucking up beyond the level of what could be a liberal education. I think too many geography departments teach too narrow a geography curriculum. Not that I want "problem solving" by calculus for everyone. But too many of our requirements are aimed at the general elementary teaching curriculum, or the non-professional major. Stiffer requirements are necessary. We are moving steadily into a more technical world and the geography curriculum has got to move with it--or we stay with the liberal education thing.

*

Long ago, we attempted to solve this problem by proclaiming (arbitrarily, of course) that geographers are (or should be) experts in location, past, present, future, physical, human, etc. That assurance provided something of a niche in the modern intellectual hierarchy, but did little to persuade people that location is important, worthy of specialized study. All of us know of the huge costs and suffering that have ensued from poorly selected sites for human undertakings, ranging from places to fight our

wars (Korea, Viet Nam), build our factories and freeways, to spending our retirement years or our vacations; and these errors are matched by ways we have chosen to ignore how our actions endanger future utilization of resources, both natural and human. . . . Greater recognition of these costs could materially enhance recognition of the need for geography, both as a cultural subject and as a profession.

The need for locational analysis seems obvious, but are we prepared to defend special training along those lines? I firmly believe that other disciplines are not prepared to do the job. None have given adequate weight to the various aspects of the context (social and physical environment) in which locational decisions must be made--to the fact that such decisions involve considerations of many factors, in combinations that vary enormously from one case to another. Furthermore, the temptation to carry forward the simplifying assumptions of their respective disciplines into real-life situations is very strong: engineers tend to ignore the human elements, while economists ignore the physical and ecologists the economic, etc., and as a consequence the "professional" advice we get is often biased. Little wonder that the general public comes away disillusioned, often concluding that locational decisions are not subject to rational analysis and best left to chance. So the need for a balanced approach is not recognized. If it were, geography would surely gain widespread support.

It is true that much of our creative effort in recent decades has gone into perfecting techniques for satisfying a demand that has not yet appeared. But I'm convinced that the thousands of man-hours that have gone into improving cartographic, statistical, and other analytical techniques are not to be wasted simply by exposing them only to other geographers. Surely the day must come when their usefulness in solving social and individual problems will be acknowledged.

*

I see a lot of resistance to, and bitterness toward, the "new movement." Statistics, which is what has invaded geography mostly, and other forms of mathematics have made relatively slow inroads in the social sciences. I think this is partially because one can quickly quantify the meaning out of things, particularly when those things are real-world, man-level perceptions.

*

I believe that the "systematic-theoretic-quantitative" direction taken by so many geographers is far too sophisticated for the average employer to comprehend. Organizations (the personnel within) hardly know what geography is, let alone the "new" geography. So the recent trend of geographers trying to impress each other at meetings and in publications is defeating their efforts to obtain positions in a realistic world. When I worked

in business as a geographer I had to forget the academic stance of the discipline and produce something that would bring in more customers, lay out a better route, or in some way improve the system or bring in more sales. . . . Geography makes a marvelous background for innumerable avenues in a young person's potential to enter a profession. . . . We've a good profession--why louse it up with a pseudo-science outlook that nobody can understand unless they are members of the "inner circle."

*

Many papers given at the AAG meetings are beyond my comprehension because I was not trained in that area; my Ph.D. will be 45 years old in June of this year.

*

The overemphasis on quantitative manipulation of research study is not the answer. We have been losing the feeling for people.

*

Spatial organization--to the businessman it is rather meaningless without considerable explanation and elaboration.

*

Have you ever hunted for ideas in mathematical geography? I think there is no hope for geography in the future if it is contented with mathematical gymnastics to the exclusion of ideas and broad understandings. Example: contrast Beaujeau-Garnier and Chabot, Urban Geography and their Geography of Population, with some of the mathematical treatments of the same fields. But I am not really a pessimist; we will come back, but may lose some ground in the process.

*

I am disturbed by the trend to consider quantitative techniques the only approach to the study of geography. This excludes historical geography or any source materials over five to ten years old. This means that courses on historical geography or history of geography are no longer taught in the department.

*

To tell the truth, I am somewhat reluctant to call myself a geographer any longer because of the extent to which geographers appear to have detached themselves from the practical world.

*

Substantial opportunity costs are involved with courses that

are offered solely for intellectual interests. . . . Can we afford to educate students as experts on 16th century place names in Borneo? One of the costs I see associated with the quantitative revolution of recent years has been the tendency for elaborate experimentation with our new found tools, with little attention paid to how they might be useful. For instance, linear programming and computer simulation are only tools; they are means to an end. . . . I'm afraid that all too often, they have become ends in themselves.

*

With the new techniques recently made available (computers, remote sensing, quantitative methods) one might expect a great outpouring of geographic research and writing. But I am not convinced that this has happened. Why not? Were the geographers more interested in the techniques themselves, than in the research which the techniques could facilitate?

*

For a long time I have promoted the idea that geographers should be specialists: but specialists in particular countries or regions. This idea is now so old fashioned that I would probably be booed off the platform for suggesting it. Maybe some one will rediscover the need for such experts.

*

Geographers have been quite amiss in not taking hold of the ecology movement.

*

It would seem to me that the contemporary interest in preserving "the environment"--or at least not mutilating it--provides a great opportunity for geographers to expand the "market" for their special expertise and to improve their "image" in the public eye. Should not special attention be paid to the kind of preparation that ought to be available for students who want to become "environmentalists"?

*

If we had emphasized environment and ecology more in our geography teaching and research we would be far ahead of where we are now. Even though I had several courses under Dr. Ellen Churchill Semple I was never led to believe that geography sanctioned environmental determinism.

*

On what basis do we think we claim support from the public? Certainly not only on cost effectiveness, if that be the case at all.

Geography as an academic field rests upon naive curiosity of the average person to know interesting things about places farther away than he can see, just as history rests upon curiosity about what things were like beyond the memory span of living persons.

*

Yes, I agree that we should have been building on man's natural instinct and interest in places.

*

Professional training and scholarship are not quite the same thing. If we get too far into the former, the latter must surely suffer. A geography that prepared cartographers, that showed us how to prepare FIS statements, or to route traffic for the C&O would certainly not have attracted me personally to the field. Places that are real and people who are real happen to interest me, and in my experience they also interest students and colleagues. We hardly need to take umbrage in the abstract to gain intellectual status, but I appreciate that there is a real role being played by our theorists, even when I personally find little of interest in what they may be saying. Still, much is being done in the name of geography that should not be--we have given complete license to our colleagues, and some have abused it. I have no idea how to control such things short of the pressure of public opinion.

*

In looking for the future geographer as a type of relational thinker who might make useful contributions toward putting people in good and permanent relations to the land we can see some hopeful signs. . . . Naturally we have a lot of competition. New methods of data collection (remote sensing), efficient means of cartographic expression (computer mapping)--all the new gadgetry is open to all comers. To perceive it in balance, against an internal system of checks and balances based on training and experience, on the other hand, is where the geographic student of landscape has the possibility of coming to truer answers than many others. It is not without reason that the term eco-freak has entered our language. What can be done to foster progress? I would answer that each department of geography must be true to to itself. Thereby we admit our well-known and oft-criticized lack of focus. Too bad. The world is a big place, and we are few. What is essential is that good work be done. Almost as important that we criticize ourselves on just that: quality, not topic. I would be glad if we were to move toward a consolidation of interests, but it must arise spontaneously, not be imposed. As we thrash around we will perhaps discover some particular points of strength now relatively neglected.

Pecking Order--Is It Related to the Job Market?

Rank ordering has come to have considerable theoretical interest for geographers in recent years and it is reasonable to ask if rank ordering of disciplines and academic institutions has bearing on job openings. Homer Aschmann, writing in American Geography, 1960-63: Education, Employment, and Other Trends (2, p. 17), expressed the opinion that because "undergraduates and graduates are encouraged or required to take too many geography courses" we may become ingrown and "appear to be naive if not ignorant. . . .[if such persons] come to form too large a fraction of the geographic profession, the discipline will be relegated to a status comparable to home economics or physical education, socially useful but not part of the intellectual mainstream."

The problem is somewhat larger. The "old school tie" can be tremendously important if the "old school" is one of outstanding reputation. Confounded by the "chicken and the egg" sequence, once established the prestigious institution lends an invaluable measure of legitimacy to the disciplines within its structure.

*

In my lifetime I have witnessed geography being phased out of the curriculums of a number of our most distinguished universities, among them Harvard, Yale, Stanford, and I believe Cornell. In each instance the reason given for the abandonment was somewhat the same, viz., the lack of any unique contribution which geography had to make. The administrators of these institutions apparently were of the opinion that if geography was eliminated, other disciplines could readily take over parts and pieces of geography's somewhat nebulous and fractured field --geology the section on terrain, meteorology the part on climate, history the geography of the past, and economics what is usually titled commercial or economic geography.

*

Geography is not found in some of the "prestigious educational institutions" simply because university and college administrators find that it is not in a position to contribute greatly to financial resources--its costs are greater than its returns to the institution. Also, its findings are seldom so spectacular that they bring the attention of the public to the university in question; the results of our research produce few newsworthy reports such as the advance of an anticipated fifth continental glacial invasion, or the discovery of the remains of a Peking man, or oil deposits in the North Sea.

*

My own experience does not support your observation that we are usually rated along with PE and home ec on most campuses. Our status here at Berkeley is good, and I think in substantial part because we have attracted good students who have impressed faculty in other related disciplines. Perhaps we have been lucky. The ones looking for job insurance are likely often to be the least interesting.

*

I should think the "new" (more theoretical) geography will finally get . . . into the Ivy League and elsewhere.

*

What prestigious universities do not have geography departments? Name more than a dozen such! Private universities in which geography was crowded out was the result of the faculty playing the game wrong when finances got short--that is the answer for most of them. The geography department of the University of Chicago has ranked tops for most of the time since Chicago began. Too much apology for this problem of why we are not at X, Y, or Z. The whole paragraph is written in a defeatist tone --if that is your conclusion, then geography is doomed, at least in any report you write.

Applied Geography--Does Scholarship Necessarily Mean Detachment from Society's Problems?

Although the subject of argument, sometimes heated, pure and applied research and associated teaching have managed for a long time to coexist in our institutions of higher education. For the future it seems inevitable that the increase in number

and complexity of society's problems resulting from crowding, mobility, natural-resource impairment, and other factors will push the nation's intellectual-resource centers into taking a greater interest in what many scholars, unfortunately, consider mundane difficulties--difficulties with which other people in other types of institutions should cope. In contrast, there are professors who assume such an intense emotional interest in society's problems that they can most charitably be described as ideologists, least charitably as "devil" theorists.

Nevertheless, the problems are real and vital, solutions many-sided and subject to give and take; the universities have a responsibility in which geographers can play a useful role.

In all likelihood the vehicle universities will find most effective in placing geographers as well as other graduates in the applied work of business and government will be that of the internship (2, 3). An all-university office entrusted with coordination of an intern program would be immensely helpful.

*

There is not going to be a general demand for geographers in the real world until geographers prove that they can be useful to that world. And until geographers do domething other than teach, then they will never prove it.

*

Having been slapped down one time by an AAG person in power when I suggested we needed to pay some attention to "applied geography" in order to place geography graduates, I'm glad you are putting your efforts into studying this problem.

*

To me, geography, more than any of the other fields of study,

offers a man an opportunity to become informed about real world problems--that is, fundamental, long-range problems. But how many people are interested in problems that extend past the next election or the next change in administrative personnel? The number is so small that it can hardly promise pecuniary success for an aspiring scholar who depends upon it for support.

*

About 25 or 30 years ago there were only a few geographers involved in working with the private sector . . . now there are at least 1000 with another minimum of 4000 in all levels of government. Progress has been made, but not fast enough, and we must broaden the market for our graduates. World War II was the turning point in the interest in applied geography, when many of us, to our surprise, found that geography actually had a tremendous value in the real world.

*

Where have geographers gone to work?

A. The early days. When geographers came out of the earth sciences, they went back there--into geological surveys a good deal. Into the normal schools in part, to teach geography teachers.

B. World War II. We did every damned thing from fly combat planes to helping companies in business, though most of us were in "intelligence" in some way or other. And pretty darned useful all the way round.

C. Post World War II. There began a huge expansion of geography programs. This expansion was far faster than we could turn out the people (one year in the 1950's a candidate of ours--who was not really tops--had his choice of seven teaching jobs, and in that year I got a telegram in June asking if we had "any live bodies"). Part of our trouble was, then, that no Ph.D. would do anything other than go into teaching. I quit trying to find other kinds of jobs, because when I found one I could not get a candidate to even look at it. When the openings ran over 200 a year, and we were turning out about 60-70 Ph.D.'s across the country, even our dumb clucks got teaching jobs. Now we are paying for this--no geographers would go into any of the lines applying geography to anything.

D. Late 1960s. Geography departments still forming--but the candidate lists were growing. We about caught up by 1970. And, unlike history, we still had no big retirement sector to absorb some of our coming surplus.

E. 1970s. Now the fifty-odd Ph.D. schools are geared to turn out about 200-250 (though we have cut down our intake, as have others) Ph.D.'s a year, and the job list runs about 130-150. Now a good many geographers are going to have to learn to look outside the teaching profession.

*

Do you recall that during the period 1941-45 the nation was scrounging around for any soul who by any stretch of the imagination could provide services of a geographical nature. . . . In Washington and elsewhere anyone who had even had a low-level college course in something called geography could find a job without trouble, and I am afraid that such poor training has reflected on the present state of the geography employment market. Anything passed for "geography" and a "geographer" and we are paying dearly for it.

*

There was a time when we thought geography was growing because of what it offered when really we were mostly feeding on ourselves and the vast majority of graduates went on to teach other geography students and we pretended it would never end. Undergraduates had little trouble in finding places in the training programs of business not because of what they knew but almost in spite of their college training. Now the fat days are over and we have to admit that outside the field of education we placed few people in jobs where their geographic skills were really used. One exception was something vaguely defined as planning. Unfortunately, most geography departments did not move into the area of modern urban functional analysis--they stuck to classic urban geography. I can remember a prominent urban geographer saying that geography didn't have to be utilitarian to be successful. Maybe not, but while we retreated farther into our ivory towers, some schools started programs in urban planning. We lost by default.

*

I formerly maintained that a person with a bachelor's degree in liberal arts with a concentration in geography had as good a chance to find a non-teaching job as those with majors in say English, history, political science, or sociology. Times have changed--I cannot in good conscience tell a prospective major that there are good opportunities for employment after graduation.

*

Geography as a preferable subject of specialization has been on the decrease in the last three years. Even for jobs in general administration within Pakistan, geography as one of the required fields of training does not appear. Even among C.S.P. (Central Superior Services of Pakistan) the number of geography graduates has been steadily on the decrease since 1948--showing that brilliant and gifted students do not take the subject because of the lack of job opportunities. . . . The number of students in geography is dwindling, particularly among men, so alarmingly, that two out of the eight degree colleges in Rawalpindi-Islamabad had to close their geography departments.

*

Where we stand today is that we have about staffed the geography departments--about as many as we are apt to get. Now we have to start pushing our people to go out into the real world and teach that world what geographers can do.

*

I think it is time for geographers to find out what employers want, especially the new young group of managers. This should be done at the various levels of company operations. For instance, I would suggest that information be sought as to what areas geography can fit into the system and what are the requirements for these various positions. What is needed for geographers to be employed in the banking, the real estate, the steel industries, etc.? What is needed for retail and wholesale businesses? What is needed for the various departments of government, local, state, federal?

*

A major problem is making known the capabilities and skills of geographers to prospective employers. I believe there are many jobs geographers could compete for if they knew of their availability and if the employers are aware of the training provided. As an example, I recently talked with the head of personnel of the H.E.B. food chain here in the southwest. He was excited about the training given to geographers and he was willing to hire a person with a specialization in location theory who would help locate new stores. I have made several such contacts over the last few months. Each of the persons contacted was surprised at the abilities of geographers and the fact that they did not know what skills modern students of the discipline were capable of performing.

*

Whenever possible, in terms of student interest and inclination, I would urge the development of competence and skill in a special practical field. I learned this in studying the market for conservationists. There was almost none for the conservation generalist. These practical fields include: regional planning, resource management, real-estate development and management, cartography, urban planning, overseas trade, health organizations and agencies. Course work and apprentice work in summers, etc., should be part of the experience of the student who wants to develop one of these practical fields.

*

The area of expansion at our school is in business administration. Business is still hiring people but their policies have changed. They no longer have to accept "any degree" and the

greatest expansion is in specialization: the Masters of Business Administration. At one time, I thought that marketing geography was going to "take off." I know of a few people who gained positions in business location analysis but this died out. I think we were unwilling to extend ourselves into the nitty-gritty behind business decisions. I still think there is a contribution to be made, especially with the tool of computor mapping--maps showing the rapid changes of settlement, changing land uses, even hourly differences in traffic flow.

*

I believe the geographer has much needed abilities to offer with regionalization schemes for a variety of local, state and federal services being established, natural resource management and land-use conflicts crying for an analytical eye, and locational decisions gaining significance in a world fast discovering its finiteness.

*

There are many excellent job opportunities for college graduates, regardless of their major, in the federal civil service. Seldom do I find a graduating senior who has even heard of the test for college graduates.

*

Perhaps we do not want to respond to the research areas outlined in Ackerman's Geography As A Fundamental Research Discipline but these are the areas in which the government is now involved--without us. The government also offers good opportunities for regional specialists, but I doubt that we direct our people there.

*

In the last five years we have sent 70 students into governmental employment most of whom have been geographers.

*

Clearly the area of land-use planning holds great promise not only for geographers but for many other liberally trained and cross-discipline scholars. The state of Florida a few years ago, passed enabling legislation permitting each county in the state to set up a planning department and legislation is now pending which may make it compulsory for each county to do so. Should this come about, there will be many job opportunities for people with proper training. Geography departments which provide training in planning-related methods and skills will surely provide their graduates with special advantages over those who come out of the more traditional departments. Course work in air-photo interpretation, map skills (both constructing and interpreting), field methods and urban studies supplemented

by rigorous demands in regard to writing skills, and generous elective background studies in the natural sciences will give the best preparation for geographers for the coming decades.

*

We have been broadly successful in placing both B.A., B.S., and M.A. people in non-teaching posts. All our departmental curricula have a core requirement in cartography and all have an option for a concentration in cartography and photogrammetry. Probably more of our people have found a job initially because they possessed command of cartographic-air photo techniques than through any one avenue. Also we have a successful urban geography and rural land-use sequence, the urban aspects of which in particular have led to jobs with urban, regional, and county planning commissions and with commercial firms. People at the B.A. level who have combined the carto and the urban concentrations have been particularly successful. We also offer a B.B.A. concentration in industrial geography--have a dozen or so students in it yearly. It blends urban, industrial, and land use on top of our core requirements in carto and physical--students from this program of course follow the general B.B.A. curriculum and they've generally had a range of job choices on graduation. We also get a group of military career-oriented concentrates every year, usually Air Force oriented and primarily interested in climatology, remote sensing and air photo, and the like. Finally, we played a leading role in establishing the University's Institute for Community and Area Development, through which the many regional planning commissions in this state were formed and nurtured. The head of the Institute is a geographer who ranks as a senior professor on our staff (though 100% in the Institute). Another key member of the Institute is a former graduate student of mine. When I recruited him from a large metropolitan planning commission for his present post I had no idea how smart I was! The staffs of these regional planning commissions run from as little as a dozen to as large as 65-70 in some areas. Through these two men, and the growing numbers of our own grads in these regional groups, the momentum keeps growing: our students just do hear of jobs as they become available and as these agencies expand! Also, our grads generally have done very well in these agencies--several now head regional commissions--and they don't hurt our reputation. Our most recent effort is to expand contacts in state government agencies, especially the Division of Natural Resources and the State Planning Commission and the Department of Industry and Trade. One excellent M.A. went to Southern Bell Telephone last year in their Economic Development and Analysis Division--I placed him through personal contacts with the head of Southern Bell in this region.

*

A number of our faculty are deeply involved in civic and business activities through regular consulting with business and

governmental agencies. Job opportunities for students often result.

*

Since we cannot anticipate specific job descriptions five years from now we should increase our emphasis on techniques and interpretation. I do not think that content will be sacrificed but rather can be learned via technique demonstration. The applied aspects of the field must be emphasized rather than viewing the discipline as only vital to a person's general education.

*

No student should be graduated without a skill. Having book-learning is not enough to enable them to get a job. The skills which would most enhance their job opportunities are those related to cartography, aerial photography, field techniques, and statistics. A geography graduate who has had only regional courses will not be able to find a job.

*

I believe departments must re-examine their undergraduate curricula. Perhaps there should be two routes to the B.A. degree. A technical route, with extensive training in map reading, air photo interpretation, remote sensing, statistical techniques and computer programming. Geographers with these skills would have little problem in finding jobs with government agencies at all levels and with private industry. A second undergraduate route, not mutually exclusive from the first, would be geared to send persons into graduate work in the discipline. At the graduate level the M.A. degree could be designed with this dual role in mind. I believe that today few geography departments really think in terms of, "What are our students going to do with their degrees?" This is a question we must face up to in the next few years and it may require considerable redesigning of courses and curriculum.

*

Given no constraints of budget and/or facilities planning, I would suggest that courses be divided. Those entering teaching need different orientation from those entering business.

*

The changes in geography over the last twenty years have generally increased the potential employability of geography graduates by both government and the commercial sector. The important changes are those that introduced and expanded the use of a more quantitative approach to the discipline and especially those that made knowledge of computer use and applications necessary for most graduate students and some undergraduates. Any

program that has as part of its requirements healthy doses of mathematics, statistics, quantitative methods and computer work is probably producing people with good potential employability in any area. Departments that do not have such requirements (either formal or informal) are doing their students a disservice.

*

As you may know, our department has emphasized course work leading to a bacelor's degree in applied geography. We provide concentrations in geography in urban and regional planning, urban land management, environmental studies, occupational tourism, and population studies. Our majors find jobs in a variety of fields, especially planning.

*

I would make the following recommendations:

A) enhance interdisciplinary communication with the urban planning department;
B) develop a business-oriented undergraduate major in geography with courses in land economics, real estate, and transportation economics;
C) initiate undergraduate and graduate internships in local government, state government, and local business establishments such as real estate firms;
D) continue to encourage the development of skills in quantitative methods, aerial photographic interpretation and field techniques.

*

With regard to what the department can do to improve its placement of students, may I list the following:

1) Develop an applied curriculum full of courses which teach students how to do something. When a student goes seeking a job, the employer usually asks what he can do. This usually is partly based on a good knowledge of statistics, and computers, and experience in handling data sets. This curriculum may demand new faculty in applied areas or those who have had experience in these areas.
2) A possible applied major with, say 40% techniques-oriented courses. This does not mean only techniques courses, but techniques-oriented courses as well, such as urban planning, transportation systems, environmental physiography, water resources, etc.
3) A good bet for jobs from such a curriculum would be in the area of environmental studies, impact analysis, and urban/transportation planning. These are our heavily requested areas.
4) A good internship program is important. We have found that people just plain get jobs through such a program.

5) Faculty must be applied to give the students this direction. This means they need to be involved in community and state applied activities. The best paradigm for placement has been a) students who have already been hired, making a good impression, and b) faculty who are active outside the department and who are doing applied research.

*

Our students work ten or so hours per week for planning and other government agencies. In the two years that we have had the program nearly everyone of our student interns has found work with such agencies.

*

We are working on an intern program for our graduate students, trying to establish contacts with various consulting, planning, business, industry, and governmental offices as potential "stations" for interns. The particular advantage here is not just the training that is provided (and experience) but the job contacts that are made--both by our staff and the intern. This, I suspect, will become broadening for both the graduate student and the professor. An extension of this which would also be extremely helpful would be for the professor to try and get into these same agencies on a temporary basis (say a term) and take leave from the university--this too would help with the contacts.

*

I think one of the major needs is to develop within a department an attitude that professors as academic geographers can work on practical problems and testing of theory. . . . We must go out into the real world and solve real problems to prove to people that we can do the work. It would be desirable for the geographer to be able to get a contract or grant to do this type of work. . . . We must show them what we can do. Some of the first work could be done free. . . . No argument convinces people you can do the job better than a high quality finished product in hand. When I go to a governmental agency to work on a problem, I explain that: (1) I can do a high quality job and I will do it on time. (2) I can complete the job for less than half the amount they would pay an outside consulting firm and that most of the money I receive goes to pay higher education expenses. . . . (3) We will keep in very close contact with the contracting agency. . . . Agencies generally like the idea that you will keep in constant contact with them concerning the research you're doing. (4) I point out that as graduate students work with me as the primary investigator, they will at all times have an understanding of the entire project, including the law or guidelines under which the work is being done. . . . When the students leave the university they are familiar with the type research geographers can do for public agencies.

Business and Government--Advice by Escapees from the Ivied Walls

Turning away from the shrinking market in teaching will not be so difficult as it was ten or fifteen years ago, a time when teaching in the public schools and in higher education presented an idyllic attraction--one for the most part of civility, creativity, and security. For many graduates, perhaps for a majority, the hard practical problems of business and government will prove more meaningful and interesting than the problems of academe: the chanciness of job security in business counterbalanced by opportunities for high financial rewards, the bureaucratic sluggishness of government counterbalanced by opportunities to make decisions of something more than academic moment. Observations and suggestions by those actually on the firing line of applied geography reinforce and add to the ideas expressed by professors in the preceding section (6, 7).

*

Modern geography is definitely an excellent background for an executive. . . .The ability of the geographer to speak the language of many specialists is a great advantage. . . . He has the somewhat unique capacity to condense and correlate masses of data supplied by scientists from other fields. . . . There cannot be any better training than that for a harassed and overburdened executive who has to make hundreds of decisions on the basis of reports and memoranda which he receives.

*

For the past forty years I have led an exciting and profitable life, initially as a geographer but for most of the time as an international economist specializing in energy resources and their utilization. I learned something about the world as a geographer; the energy expertise I developed, mainly, in the course of my employment. I have been helped greatly by (1) a fondness for numbers, and (2) a capacity for foreign languages. The latter is a major advantage in this country, where so many people appear to have an absolute blockage for all foreign languages.

*

Currently I am general manager of a large real estate firm and my income is much more than I could have expected if I had stayed in teaching.

*

Based upon thirty years experience in various positions entitled "Geographer" with the Federal Government, it is my belief that the problem of how best to enhance the employment opportunities of those trained as professional geographers is fully as important as the development and improvement of scholarship in the field of geography and far more neglected. Obviously geography can't get anywhere without sound scholarship but at least many geographers have worked and are working at it; this is not the case with regard to the question of job opportunities for geographers. Not very much has been done about this with the exception of the Placement Committee of the AAG which has developed and improved a very useful service.

*

There needs to be in each geography department one person on the teaching staff who is deeply and continuously concerned with job opportunities. Ideally this should be the chairman since he is in the best position to tie together the teaching and research programs with the placement program. In other words to fit the training and output to the requirements both actual and potential. This will not work, however, where the practice of rotating chairmen is done and where the individual regards his term as chairman as an interlude to be endured or as an administrative burden until he can get back to cloister and real purpose of his life--research.

*

Most successful geographers I have known have had a basis of study in depth in some one or more of the earth sciences--geology, soil science, or the like, along usually with economics and/or anthropology.

*

As long as the geography courses in the public schools are chiefly related to states--their capitals, etc., the general public--including those who are in administrative positions and should consider geographers--don't have any notion as to what geography is all about. In other words, the popular image of geography needs to be changed. . . . Many of the studies made by the International Monetary Fund-World Bank staff for underdeveloped countries, for example, would be improved if a geographer were involved--but the executive staff doesn't know what geographers can or should be able to do.

*

If a student plans to make a career out of the Civil Service, I personally would not advise him to go beyond the Master's level until he has been on the job for a while, to determine if he likes that type of work and to find out what the educational requirements for advancement are in that particular area. Often, he will find that the Ph.D. is not required, and whatever education is necessary can be picked up by a combined program of night-school courses and on-the-job training. If I had the opportunity to do it over, I would have tried for a Government job after completing the M.A. and subsequently taken whatever courses I needed at Government expense.

*

I believe it is important to inform the student concerning the amount, as well as the type, of education necessary to qualify for a Federal Government job. This depends somewhat on whether the student is seeking a job with an R&D organization or an operational element. Examples: Engineer Topographic Laboratories is an R&D organization; CIA is an operational element; both hire geographers. It is helpful, although not absolutely necessary, to have an advanced degree before seeking employment with an R&D agency. Also, other things being equal the person with the advanced degree usually moves up the ladder faster and gets the higher grade jobs. The operational elements such as CIA usually do not pay much attention to advanced degrees, and my understanding is that the lack of the M.A. or Ph.D. does not impede the progress of an otherwise well-qualified individual.

*

For most geographers who plan to work for a Federal agency in research and development, I would recommend greater emphasis on training in the analytical approach and the application of geographic techniques to problem solution. I believe systematic courses should be emphasized, and at least part of the course material presented in the form of a series of contemporary problems to be analyzed and solved.

*

I think university departments have an obligation to define as well as they can, what the employment opportunities are and will be for their students. This could be done through a variety of media: formal classes, special guest seminars, etc. . . . Perhaps this is the answer to the problem of relevance; let the student choose his own courses, in full recognition of the implications of that decision with regard to employment.

*

In Government most employers seem to be looking for specialists, particularly those with a highly developed technical skill. The generalist geographer should be as well qualified as any other professional for higher echelon decision-making positions or planning-type jobs where the environment is involved, but he faces tough competition from other fields which also consider the environment their province. Perhaps the only way that geographers will become accepted in the job market is to have people who call themselves geographers prove that they can make contributions to the solution of important problems. I don't think geographers, as a group, have been accepted yet as skilled technicians who can make unique contributions to the solution of problems.

*

Having discussed the matter with many geographers in the Washington area I think I can say that there is something of a gap between academic geography and the applied geographer. The federally employed geographer is often better paid, supplied with better equipment, involved in more sophisticated and more technical research, with better access to "highly fugitive" sources, and produces a generally more visible product with greater tangible impact, but still is regarded with something between disdain and condescension by his academically employed colleagues. Snobbery is universal and there is no reason why it should be absent in our profession, but it seems to me to be a luxury we can ill afford during tough times. Moreover, I believe there is a widespread conviction among the senior, and presumably those most likely to be influential in hiring and firing, government geographers, that our graduate schools do not produce a product well prepared to attack productively any but the most narrowly academic topics. Pete Burrill phrases this as an inability to "identify the proper question," but I feel it is a bit broader than that. It also includes an under-evaluation of practical considerations (like billions of dollars or the real-life conditions of real people), an over-confidence in esoteric methodological gimmickry with a concomitant under-evaluation of judgments and subjective insight, and an inability to work efficiently with a research team. . . . I am sure these sound like unregenerate views from the 1940's or 50's at best, but I came out of my dissertation (just a few years ago) convinced that theory building, quantification, and abstractions were the only worthwhile academic pursuits. I spent almost a third of my effort on a lengthy dissertation writing a long and complex computer program that has not been run once since I got my first successful output. So, I feel I have a right to these views--when I encountered the policy level of research I soon found that much of what I had spent the major share of my attention on was more usefully relegated to "technicians" or "assistants" while the "senior researchers" devoted themselves to the more central tasks of meaningful, and hopefully innovative, thought. Quite an eye opening. I believe the message is worth telling, though it is frequently

not received well. The heart of the gospel is simply to put the emphasis back on the true heart of "research"--the function of "innovative" or "fresh" or "original" thought. There are no hardware, software, or logic-ware shortcuts. It may sound naive, but I assure you these skills will get you more mileage in an applied field than methodological elegance.

*

An increasing number of graduates today, while well-armed with regard to methodology, analytical skills, and so forth, have had little experience with problem definition. As a result, we have people showing up who can tell what tools they want to use, but who are unable to define problems. What this means with regard to employment is that potential employers are approached in terms of how a problem can be solved rather than from a perspective of "Here is the nature of the problem. Now, given that particular problem, here are the appropriate tools for solving it."

*

Geographers should not be educated to be primarily academicians. . . . I know several geographers who have made excellent executive directors of regional planning agencies--the collective thinking involved holds them in good stead.

*

A very substantial boost can come from getting several geographers in hiring positions in the various employment fields. Until this is done, the whole selling job, including teaching the boss what geography is, has to be done for each individual placement. As was demonstrated in WWII and the following years, several government agencies hired fairly large numbers of geographers. This was largely due to the fact that a few geographers got into positions with hiring authority. I certainly feel that being able to hire in the neighborhood of one hundred geographers during my years in government and putting them to work at their top capacities without having to explain what their subject was every day, was my major accomplishment for the profession. Perhaps one of the reasons I could do this was that I had geologists, meteorologists, geophysicists, soil scientists, and engineers (civil, electrical, hydraulic, chemical, etc.) on the staff and all were competing in a sense to understand and interpret the natural environment and they all stimulated each other. But in my organization the geographers were at no disadvantage in relation to the other scientists and the engineers.

*

Here in our agency, the people hired at the professional level

had been doing research related to problems being worked on here. By word of mouth, through associations with individuals in university departments or other research organizations, supervisors here learn of the existence of a person who might be suitable to fill a position. Of course hiring is done from the Civil Service Register, but all else being equal, the person with the direct or indirect "contact" certainly has the edge. I would suggest, therefore, the main approach the department could take to enhance job opportunities for students, is to gain more personal contacts with research institutions. Bid on contracts such as those which appear in the Business and Commerce Daily. Consultant positions held by professors also offer an excellent avenue for communication that could well lead to future student employment. The point I am trying to make is that the only "message" that is likely to be meaningful to a prospective employer is one of personal communication and experience.

*

The U.S. Army Engineer Topographic Laboratories has more geographers employed than any other single discipline (unless one groups all the engineering degrees together). We have about 35 people with degrees in geography, although a number of these work in areas not classified as geography, such as systems analysis and computer sciences. Some of our geographers hold very important jobs: one is Director of the Computer Sciences Laboratory, one is Chief of Geographic Applications Division of the Geographic Sciences Laboratory, and several others are branch chiefs. Most of the people classified as geographers are in the Geographic Sciences Laboratory (a geologist is director of this lab) which is responsible for research and development in areas of new technology, new products, and systems to provide for more rapid dissemination of high quality military geographic intelligence to the troops in the field, and also to improve the environmental criteria used in the design and testing of military materiel.

*

People just aren't going out to find potential employees any longer. You will have to go to them and you will need to convince them as to why our people should be hired. Students would work for a particular organization for perhaps a quarter. They would receive university credit. The employers would acquire some skills and talents it might not have and the student would provide employers with an opportunity to see what geography has to offer, at little or no cost.

*

As far as influencing the opinions of administrative and personnel officers in government, business, and education vis-a-vis

geography, the best way is probably through student field placements in these areas. This is helpful for several reasons: First of all it gives the student critical and invaluable on-the-job experience. Secondly, it gives administrators and personnel officers the opportunity to see for themselves the skills offered by our discipline at little risk. Lastly, it enables the discipline to maintain day-to-day contact with the practical problems confronting our world and, therefore, to remain flexible and up-to-date in approaching these ever changing dilemmas. Too often a student leaves the university with four years of training so esoteric that they have to be retrained for several months to be useful to their employer.

*

Most Federal Government agencies are not hiring many geographers these days because cuts in Defense spending have hit particularly hard in those areas where geographers have traditionally been employed.

*

It has been said that the purpose of the civil service commissions is not to hire people, but to keep people out. In other words, the user agencies hire the professionals they want through the civil service commission. This exclusionary practice is made easier in the case of applicants with geography degrees, since only a handful of positions in government carry the title of geographer.

*

Not long ago I called at my old office in the Department of State and spoke with an associate who knows the Washington story as regards geography and geographers in government. Perhaps you know the story--geographers are being unloaded in many of the departments. Some are losing their positions because of cut-backs, which is quite to be expected in a recession when the hot breath of economic pressure hits personnel policy. But much worse, my informant pointed out that when geographers retired, they were not replaced by other geographers. Two or three agencies, formerly strong with our colleagues have just about been cleaned out.

*

Unfortunately the working climate widespread among Federal agencies has taken a very disheartening downward plunge in the past five years or so--so much so that it stymies thought regarding proposals to increase geographers' participation in government work. But it does make one look forward to retiring as soon as eligible.

Flying Under Different Flags

Previous sections, particularly that on applied geography, stressed the importance of cognates. In business and government, the graduate will generally not work in jobs titled geographer. This raises the question of the direct versus the indirect route: if the student is strongly motivated toward the affairs of business and government, why not major directly in the departments most intimately responsible for such education? Why not major directly in business administration, natural resources, planning, mathematics and statistics, etc.?

The decision to become a geographer yet work under a different title depends on many reasons, the most desirable being the student's strongly felt appreciation of the importance of spatial knowledge, skills, and geographic points of view. The hope, of course, is that eventually jobs in business and government held by geographers will come to be more appropriately identified. And this will depend in considerable measure on how determined geographers are to fly their own flag.

*

Be geographers and stand up and be counted.

*

My initial reaction is to place less emphasis on the field of geography as such. It seems that our graduates, at least, must sell themselves as planners, regional developers, cartographers, or the like. As soon as they mention the term geography many potential employers seem to become less interested.

*

There are no easy answers, no obvious prescription. I am always leary about excessive redeployments toward professional jobs

simply as a means of maintaining our numbers and further increasing them. For quite a few of the kinds of students we see, graduate study in geography is or has been in part attractive because it has led into teaching--if it did not some at least would have been much less inclined to follow us. If I wanted to go into business as a student I suspect that I might have chosen bus ad or accounting or some such--it would be a much more certain routeway to employment certainly.

Public-School Geography--Poor Teaching or Structural Constraints of Curricula?

Despite excellent textbooks and other materials prepared by some of our most scholarly and respected professionals, geography in the public schools does not fare well. Is it inherent in the nature of the subject that it cannot be made viable for youngsters, that it must degenerate into fragmented rote? Or is it the teachers, many alleged to be poorly trained? Or is it the attitudes and value systems of the professional educationists who in fact make most of the curricular and other decisions in running the public-school system? With geography broken and scattered in general-science and social-studies courses, or when as a separate and distinct subject it is frequently used for a resting place of the least-motivated students, can the adult public emerging from such arrangements have any meaningful understanding of geographic realities and the potential employability of those calling themselves professional geographers?

*

In my experience, most of the B.A. and M.A. geography majors enter the public schools as teachers. . . . [consequently] our energies should be directed toward the graduation of better geography <u>teachers</u> if we are to meet the real-world needs of

our participating student body. . . . My colleagues seem preoccupied with the more traditional concerns for content, completeness, structure, while skill in communication, enthusiasm, and originality are often overlooked or under-rated.

*

The undergraduate geography program leading to a B.A. degree with a teaching certificate seemed to me quite adequate as preparation for working with secondary students. In fact, I think it gave me a very broad base of knowledge without too much heavy concentration in any one area. If I have any criticism . . . it would be a need for more coordination between the department and the college of education and the placement services as far as developing adequate and saleable background for the secondary teacher to present to potential employers. Also, since so many undergraduates are in the teaching field, I would like to see the undergraduate advisor spend more time in helping students develop their minor and cognate areas, perhaps by talking with the placement services people and those at the college of education on a fairly regular basis to determine what fields are most in need of graduates, i.e., which are in shortest supply, overcrowded, etc., because the right minors and cognates are just about as important in obtaining teaching jobs as the major field. . . . I also think the methods-of-teaching secondary-geography course should be further developed and that it should be a required course.

*

The best solution, but surely not the easiest to implement, would be to get geography back into a more major role in the public schools at all levels. I know that you are well aware of the historical decline in the importance of geography at all levels in the public schools, but I hope you share my optimism that we do not have to accept this as our eternal destiny. We must, I think, do everything in our power to get geography before the public in a favorable light. This means challenging school boards who boast of "how much they loved geography when they were kids but . . . ." This is a monumental undertaking, but one which has to be done.

*

. . . set aright the public impression that geography is an easy subject and consists merely of some fragmentary knowledge of where places are located. An educational program of massive proportions is called for, aimed particularly at public-school administrators who have consistently treated the teachers of the subject as unwanted stepchildren--possibly bastards.

*

The problem of geography goes back to the elementary school. . . . Perhaps the damage was done by Rugg. In his combination of history and geography, the latter suffered. The teachers had studied history, but they were lucky if they had taken one course in geography. . . . Why can Canada teach geography from K-12? Wilfrid Laurier University, Waterloo has 80 undergraduate majors in geography; twenty are writing Honors, plus graduate students. In fact there are more graduates in geography than in history. Are we too lax on the elementary level? Has sociological role playing and situation ethics taken over so much of the curriculum? . . . The teaching of geography requires special methods--methods that must be taught by a geographer not an educator who lets students make a paper-maché globe without latitude or longitude and incorrect relations of land masses to each other, and thinks what a wonderful piece of work they did.

*

Change is not likely to occur from within K-12 but will have to be lobbied from outside. I feel representatives should be sent to school systems from two- and four-year institutions to register complaints and concern over the slighting of geography in the curriculum. . . . To this time college instructors have spoken only to each other.

*

The certifying criteria for teachers in this state, like most, are set by the State Department of Education. When you "worm through" what goes on in setting certification standards, you find--or we did here--that the College of Education faculty worked hand-in-glove with State Department people to get certification requirements much as they wanted them because these requirements were vital to their own faculty. Most of the State Department people were and are graduates of our College of Education, return(ed) to it for advanced training and degrees (which meant promotions) and these people were highly dependent upon the senior faculty in Education for job recommendations, professional advancement, and the like. The two groups have worked together to enhance their joint, their institutional, and their personal interests in a stylized and highly political manner--each so very cognizant of the wishes and powers of the other--that it has a certain liturgical quality to it. We felt the only way to some accreditation recognition for geography at the state level lay through our Education people and what we did was try to get them to advocate accreditation of not just a Social Science Teacher but one who had a substantive major and at least one substantive minor. We tried to rally the support of sociology and political science to this view and had moderate success--at least, it became possible to certify social science concentrates who weren't 100% history trained. I would say we were reasonably successful along this line but not highly so. Part of the

difficulty is a huge, entrenched, History Department that never did accept giving up its overwhelming position in Social Science education. But--we do now have certified B.S. Ed. majors in geography where there were none before. The NSF Institutes in the early 60's helped here too: we produced, from non-geography trained teachers, some whose impacts on their school administrators when they returned to their jobs were great enough to lead to direct requests for certified geography teachers.

Women and Minorities in Geography--the Forgotten Ones?

Of the respondents, both men and women, only one, a fairly recent Ph.D. white male made reference to affirmative action programs: "Affirmative action as a criterion used for employment is not a myth! I frankly see no alternative to affording the graduate student experiences that equip him to free-lance or operate as an independent entrepreneur. If 'The Way Lies Open' it is in that direction. University opportunities for employment of Ph.D. geographers have dried up." Absence of response does not mean that women and minorities in geography are not subject to discrimination--forward and reverse--but that the problem may not be widely recognized by geographers.

AAG estimates indicate that Blacks and Spanish-Americans account for only slightly more than 2 per cent and women about 15 per cent of the association's membership in 1975. On the other hand geography in terms of degrees granted to women shows a good <u>comparative</u> record: in the United States for the period 1947-48 through 1971-72, women earned nearly 20 per cent of the B.A. degrees (history 33, economics 10, geology 6); 16 per cent of the M.A.'s (29, 11, 5); Ph.D.'s 7 (12, 6, 3).

The road to equity for women and minorities is a long one.

Unfortunately, "affirmative action" has come to mean for many people a policy of reverse discrimination: "merit" has become "meritocracy," a dirty word; the days of the kings seem to return with divine rights for those whose heritage includes X-X chromosomes or disadvantaged great, geat grandparents. The idealistic young enforcers of "fair play" may find they have so abused their mission as to bring equally abusive counteraction.

Lifelong Learning--All the Geography You Need to Know by the Sixth Grade?

Strange antithesis, the public's opinion of but interest in geography. It is likely that the majority of the adult public believes that, as Fenneman phrased it, geography should be "preserved for children up to the age when serious study should begin." On the other hand, very few concerns (economic, political, military, etc.) are as ever present as those having a basis in spatial knowledge--workplace, homeplace, routeways, recreational areas, the nature of strange countries giving the United States a hard time. In fact, geographical matters are among the most common in everyday conversation. Yet the general public is almost totally unaware of the fact that these are the very things that most geographers are attempting to learn about, analyze, and give currency to.

It would seem that lifelong learning (3)--a dusted off, better financed, more enthusiastically supported program of continuing education stimulated in large part by higher education's fear of losing its enrollments of traditional clientele—offers

the geographic profession a golden opportunity.

The profession has the saleable goods in hand--well developed cultural and technical courses. Does it have the will to hustle for the market?

Why Talk Only to Ourselves?

More than most, the geography profession is a closed society. Not as surrogate but as direct indicator is the virtual absence of coverage by news media of national and even international meetings of professional geographers. Is it because of what we have to say? Or how we say it? Or lack of forward publicity? Or . . . Only a small number of our authors have managed to reach a wide noncaptive audience and we have, by various means, assigned some of these writers to the virtual status of non-persons. Departmental imprimaturs increase by the hour but distribution problems prevent them from reaching widely even into professional readership; as refereed articles come to be more widely used as the measure of publish or perish it seems likely that these non-inexpensive house organs will lose pragmatic value.

If we truly want to communicate, we have the audience--witness the success of the Geographical Magazine, Canadian Geographical Journal, and the National Geographic. And there are scores of other outlets--professional serials of other disciplines, literary magazines, the media in general. If we want to communicate we must learn how to write and this means turning

off the turgid prose of pedagese-scholarese.

But this is not enough. The reward system--promotion, salary, perquisites--must be made to respond to our success in talking to someone other than ourselves.

*

Where are the Paul Ehrlichs, the Barry Commoners, the Marston Bates of geography? . . . We need very badly, I think, to get involved in problem areas on both the local and world basis--in areas of food availability, storage, and transportation; in housing; in population studies; in environmental concerns; in land-use analysis and planning, in wise use of resources.

*

You can look in any newspaper in the country and not see the word "Geographer" in the want ads. Even the L.A. Times with its endless pages of ads for employment. So, that alone means that we have a profession in which we must adapt to the conditions that prevail.

*

It is ridiculous in my eyes that the profession has turned snob against the National Geographic.

*

Excellent popular geographic books such as those written in the field of history would help. There is the National Geographic but it is not held in very high regard by those connected with universities. Something between the National Geographic and academic journals would help.

*

We need to achieve recognition in a wide list of publications; in my own career I have tried to do this very thing, so my name appears as author in two issues of an antiques magazine, in a conservation publication, in a fraternity quarterly, and in several historical periodicals. . . . We need this type representation outside our own field, and in my experience no editor has yet refused to publish anything I may have submitted to him. We need to submit many more news items and feature articles to local newspapers, and if possible obtain television time in which aspects of geography can be brought before the public.

*

Really, if you want an answer to your problem look back over the yellow pages of the Geographical Magazine (Britain). In Britain, with no uncertainty, geography flourishes in school, business, research, and government, and, lastly, in popular exposition.

*

I have found that one of the major difficulties in our "status" problem in both business and in academia is the National Geographic, which to the millions of its readers both on the campuses and off represents professional geography. This is a fact, not sophomoric.

*

As I see it, the problem is fundamentally related to the nature of the discipline and its historical development. The emphasis on theoretical analysis rather than practical applications is a long established tradition, although in recent years there has been a visible effort toward research of greater pertinence. Just as an example of this, I cite the contents of the January 1975 issue of the Geographical Review. The articles include one on how memory of the past influences the present landscape, an evapo-transpiration estimation scheme, marketing in Uganda, dooryard gardens in Texas, and the salt industry of Ming China. Interesting but, with the possible exception of the evapo-transpiration study, none suggest research pertinent to the vast majority of possible job openings in government or industry. The problem, therefore, would seem to be that administrators in a position to hire, but who are not geographers themselves, do not tend to associate geographers with the kind of work that exists at this time.

*

I doubt that one out of a thousand people in the resource management field today read any of the professional geographic journals. If they did, most wouldn't understand them. And, if they don't read the professional journals, it's unlikely they have any contact with geographers. The point is, geographers must start working and communicating through a much wider range of media than they have done. This latter point also means that the reward system in universities might have to be altered. One reason university impact on a field like resource management has been small is the lack of internal incentives within the universities that encourage and reward such participation. Formal publications still are generally the key to success within the university system and that fact hampers the flow of university input to many important issues.

Conclusions

Best given in the words of respondents: "I must say that you propose to tackle a subject around which there will be as many answers as people answering." True, but are all the opinions equally valid and are the valid ones easily spotted? Not so: "I have been mulling over the problems you raised for many years without finding an answer--or answers."

Returning to the first paragraph of this report, the responsibility of the university to produce and disseminate reliable knowledge. For its part, academic geography in its openness to both internal and external scrutiny and evaluation seems ready to accept its share of the responsibility. The degree of success, however, will depend on society's willingness to greatly increase the man (and woman) power devoted to geographical inquiry.

Footnotes

1 Nevin M. Fenneman, "The Circumference of Geography," Annals Association of American Geographers, 1919, pp. 5-6.

2 Association of American Geographers, Washington, D.C.:

Status and Trends of Geography in the United States 1957-1960, 1961, 66pp., Clarence F. Jones, Chairman.
American Geography, 1960-63: Education, Employment and Other Trends, 1964, 74pp., John P. Augelli, Chairman.
Geographic Manpower: A Report on Manpower in American Geography, 1966, 28pp., prepared by John Fraser Hart.
Manpower in Geography, An Updated Report, 1972, 36pp., John Fraser Hart.
Community Internships for Undergraduate Geography Students, 1973, 10pp., Kenneth E. Corey and Alfred W. Stuart.
Careers in Geography, 1974, 49pp., Salvatore J. Natoli, Ed.

3 Journal of Geography:

Claude E. Hawley and Lewis A. Dexter, "A Basis for Studying the Supply of Geographers," April 1952, p. 163.
Kenneth Thompson, "The Academic Outlook for Geographers," May 1959, p. 226.
Harvey E. Heiges, "A Student Internship Program in Geography," November 1972, pp. 458-467.
Briavel Holcomb, "Geography in the Competitive Academic Marketplace," February 1974, pp. 40-43.
Jerry E. Green, "Undergraduate Geographic Training for a Planning Career," April 1974, pp. 6-7.

Professional Geographer:

William Applebaum, "What are Geographers Doing in Business?" January 1956, pp. 2-4.
Joseph A. Russell, "Trends in Placement and Training of American Geographers," May 1958, pp. 32-37.
Clarence F. Jones, "Status and Trends of Geography in the United States, 1952-57," June 1958, pp. 1-134.
Steven K. Pontius, "Jobs in Geography," August 1973, pp. 277-279.
Ronald L. Carter and John E. Steinbrink, "Geography: From the Product Concept to the Marketing Concept," February 1974, pp. 1-4.
Mildred Berman, "Sex Discrimination and Geography: The Case of Ellen Churchill Semple," February 1974, pp. 8-11.
Paul A. Scipione, "On Options and Alternatives," February 1974, pp. 105-106.
Richard L. Morrill, "The Future of Geography," February 1975, p. 1.

3 (cont'd)

AAG Newsletter:

"San Diego State University Programs for Non-Academic Employment," January 1975, p. 4.
John Fraser Hart, "Preliminary Report from the Committee on the Profession," March 1975, p. 6.
"Graduate Students in the Sciences," April 1975, p. 12.
"AAG Membership Profiles," May 1975, p. 3.
John R. Borchert, "Supplementary Report from the Committee on the Profession," June-July 1975, p. 17.

4 Alfred H. Meyer, "A Geographic Classification of Geography Materials as Based Upon the Dewey Classification System," Annals Association of American Geographers, June 1947, pp. 209-222.

5 Nordis Felland, "Geography," Library Trends, Bibliography Part 2, April 1967, pp. 704-709.
Roman Drazniowsky, "Cartography," Library Trends, Bibliography Part 2, April 1967, pp. 710-717.
Chauncy D. Harris, "Geography," in Carl Milton White & Others, Sources of Information in the Social Sciences: A Guide to the Literature, Chicago, American Library Association, 1973, pp. 139-180.

6 "Employment in a variety of jobs--academic and nonacademic--has convinced me that academics can be as petty, venal, and tiresome as the stereotype of the businessman in Babbitt. Not all businessmen are the mindless cretins we see in the movies; industrial employment does not inevitably debase one's soul or debilitate one's mind; nonacademic employment is not the last refuge of a scoundrel or a betrayal of the humanistic values which we all claim to defend. . . . After deciding to examine nonacademic employment, I looked for work through four channels: the university placement service, the Civil Service Commission, private employment agencies, and the want ads. Each was instructive and sometimes fun, but only the last was immediately productive." John T. Harwood, "Nonacademic Job Hunting," Bulletin American Association of University Professors, Autumn 1974, p. 313.

7 U.S. Civil Service Commission, Guide to Federal Career Literature, 1972, 34pp., and Federal Career Directory 1975, 1974, 142pp.
U.S. Department of Labor, Occupational Outlook for College Graduates, 1974-75 Edition, 1974, 290pp.

8 "Lifelong Learning, the Back-to-School Boom," Saturday Review, September 20, 1975:
Fred M. Hechinger, "Education's 'New Majority'," pp. 14-18.
Gene G. Gage, "The Nordic Example," pp. 19-21.
Gene I. Maeroff, "From Mel Brooks to 'Medicine '75'," (New School for Social Research), pp. 24-26.
Benjamin DeMott, "'Adult Ed'--the Ultimate Goal," pp. 27-29.

Appendix

Letters of Inquiry

Names of Respondents

MICHIGAN STATE UNIVERSITY

DEPARTMENT OF GEOGRAPHY EAST LANSING • MICHIGAN • 48824

March 18, 1975

I am writing to you and to a small number of other senior members of the profession hoping to elicit your advice regarding a problem of mutual concern. The university has given me a year free of teaching to carry on this and other studies prior to retirement at the beginning of 1976.

The problem is this: how best to enhance the employment opportunities of those trained as professional geographers (undergraduate majors and holders of advanced degrees). As a profession, we have taken, perhaps to too great an extent, the demand side as a "given"--employers are out there and they will come to us. Can we identify for prospective employers (academic, business, government) specific aspects of their operations that would stand to benefit by hiring a professional geographer? On the supply side we have concerned ourselves mainly with a great variety of "schools of thought"--paradigms that since WWII have emphasized the systematic-theoretic-quantitative triumvirate undergirded by scientism and a conviction that the mark of a true profession is a vocabulary intelligible only to the initiated. Admittedly this has met the desires of at least part of the market place--those of the post-secondary academic, many planning agencies and think tanks, but much less those of business and government.

I would be greatly obligated for an expression of your judgment. Restating the argument: progress of geography as a scholarly discipline will depend on the growth in job opportunities for those professionally trained. What specifically can we do to improve our performance with regard to both the demand for and the supply of professionally trained geographers?

Maybe this ground has already been raked over so thoroughly that there's not much left to do. However, I think old verities bear restatement as well as the tautologic "newly innovative." Findings will be made available to you either in a mimeographed report or a short article in the Professional Geographer. Without elaborate bibliographic trappings I am including on a separate sheet a number of questions based on facts, implicit assertions, and "outrageous" hypotheses as targets for response.

Thank you for any reply you may wish to make.

Sincerely,

Clarence L. Vinge
Professor, Geography

CLV/lm

We will move forward in jobs and in other ways to the extent that those outside the profession respect us and need our work.

Progress during the last 25-30 years. We compare favorably with geology, badly with history. During the 16-year period 1954-55 through 1969-70, geography graduated only some 28,000 bachelors (history 375,000), 5400 masters (44,800), and 1320 doctors (9060). The subject matter of history is no less intractable than that of geography. To what extent is the great difference in popularity explained by the biographic factor--studies populated by people who are real rather than statistical abstractions?

Pecking order and the sensitivity quotient. Why is geography not found in many of the prestigious educational institutions? Where geography has gained a hold, why in intellectual status does it usually rank with physical education and home economics? Why have we produced so few geographers whose voice carries beyond the fence? In our penchant for creating house organs, in response to the publish or perish syndrome, do we run the risk of starving to death the very journals, such as the Geographical Review, that over the years have been largely responsible for geography's legitimate claims to scholarship? Do we gain status by our sophomoric display of intellectual smugness toward the National Geographic Society? Distance decay and the geographic corpus: can a discipline thrive without a physically identifiable body of knowledge? Have we been sabotaged by the Dewey-LC classifications? Why is the geographer-cartographer among the lowest paid of all professionals working for the federal government? In the abundance of richly subsidized overseas programs since Point Four, why have geographers played a virtually nonexistent role?

Paradigms and the continuing search for a disciplinary slot. Is it a matter of "pick up and drop" as suggested by Whitaker's story of the ape in the cornfield, with emphasis at times on "leftovers" and, more currently, on "takeovers"? Without a program it's frequently difficult to tell the geographers from the statisticians, psychologists, and logicians.

Generalist vs specialist. The geographer as generalist seems seriously handicapped in a public that glorifies the specialist. Strong cognates definitely help us. We might even consider accepting for graduate work only non-geography majors as once recommended by Sauer. But whatever the way, is it in our interest to narrow the field by definition--to strive harder and harder to become specialists? A recent U.S. Senate report on this problem of specialist vs generalist carries this observation:

> Modern-day specialists can make important contributions in decisionmaking; but there is no substitute in government for the wise generalist with skill and shrewdness in judging the competence of specialists and in determining the operational feasibility and political acceptability of any plan of action...particularly the challenges of dealing with people in a range of different situations at home and overseas.

This observation is as germane to business and academe as to government.

MICHIGAN STATE UNIVERSITY EAST LANSING

DEPARTMENT OF GEOGRAPHY

March 21, 1975

I am writing to you and to a small number of other graduates of the department hoping to elicit your advice regarding a problem of mutual concern. The university has given me a year free of teaching to carry on this and other studies prior to retirement at the beginning of 1976.

The problem is this: how best to enhance the employment opportunities of those trained as professional geographers (undergraduate majors and holders of advanced degrees).

Of the conditions within the control of the department, what are the things we should be doing better, shouldn't be doing, or that we should add? What can be done about factors external to immediate departmental control? Probably the most important among the external factors are the views of geography held by those who do the hiring--administrative and personnel officers in government, business, and education. In influencing these people, is it a matter of message, or media, or both? If it is one of message, what paradigm(s) would open the job markets most effectively?

Any help you extend will be appreciated.

Sincerely,

Clarence L. Vinge
Professor, Geography

Names of Respondents

Prof. Mamie L. Anderzhon, Shenandoah, Iowa

Dr. John C. Archbold, Spring Valley, California

Dr. Harry Bailey, University of California, Riverside

Dr. John M. Ball, Georgia State University

Dr. Thomas Frank Barton, Indiana University

Dr. D. Gordon Bennett, University of North Carolina, Greensboro

Dr. Norman C. Bettis, Illinois State University, Normal-Bloomington

Dr. Michael J. Biechler, California State University, Fresno

Dr. Bob Campbell, University of New Mexico

Dr. William H. Cheek, Southwest Missouri State University

Capt. Harry E. Colestock, III, U.S. Air Force Academy

Dr. Arnold Court, California State University, Northridge

Dr. Floyd F. Cunningham, Downstate Enterprises, Carbondale, Illinois

Mr. Peter W. DeForth, U.S. Geological Survey

Dr. Robert E. Dickinson, University of Arizona

Dr. Fillmore C. F. Earney, Northern Michigan University

Dr. Elizabeth Eiselen, National Council for Geographic Education

Mr. Leonard D. Espinosa, Ingham County Department of Social Services

Dr. Edward A. Fernald, Florida State University

Dr. Jack Ford, Shippensburg State College

Mr. Nathaniel B. Guyol, San Rafael, California

Lt. Bevard E. Hargrave, U.S. Navy

Mr. Richard K. Haugen, U.S. Army Cold Regions Laboratory

Dr. Leslie Hewes, University of Nebraska

Dr. Robert K. Holz, University of Texas, Austin

Dr. G. Donald Hudson, Seattle, Washington

Dr. Preston E. James, Atlantis, Florida

Dr. Don Janelle, University of Western Ontario, London

Dr. Charles E. Kellogg, Hyattsville, Maryland

Dr. Charles F. Kovacik, University of South Carolina

Dr. Annemarie Krause, Andrews University

Dr. David E. Kromm, Kansas State University

Dr. Richard Kurzhals, Grand Rapids Junior College

Dr. DeWayne Kyser, Central Michigan University

Dr. Minnie E. Lemaire, Holden, Massachusetts

Dr. Art Limbird, Bowling Green State University

Dr. Jahan Malik, Rawalpindi, Pakistan

Dr. Kirtley F. Mather, Albuquerque, New Mexico

Dr. Harold H. McCarty, Laguna Hills, California

Dr. Terry L. McIntosh, University of Kentucky

Dr. Vincent Miller, Indiana University of Pennsylvania

Dr. Raymond E. Murphy, Deltona, Florida

Dr. Thomas E. Niedringhaus, U.S. Army Engineer Topographic Laboratories

Dr. J. Warren Nystrom, Association of American Geographers

Dr. Martha Palmer, University of Houston

Dr. James J. Parsons, University of California, Berkeley

Col. Orin C. Patton, U.S. Air Force

Dr. John W. Pawling, Temple University

Dr. G. Etzel Pearcy, Long Beach, California

Dr. Ross N. Pearson, Eastern Michigan University

Dr. Bernard C. Peters, Northern Michigan University

Dr. Rafael Picó, Banco Popular de Puerto Rico

Dr. Merle C. Prunty, University of Georgia

Dr. Randall Rathjen, Homefinders Realtors, Palatine, Illinois

Dr. H. F. Raup, Kent State University

Dr. Gerald W. Ropka, DePaul University

Mrs. Claudia Hamel Rossman, Jackson, Michigan

Dr. Joseph A. Russell, University of Illinois, Urbana-Champaign

Dr. Richard A. Santer, Ferris State College

Dr. Guy-Harold Smith, Ohio State University

Dr. Joseph E. Spencer, University of California, Los Angeles

Dr. John W. Stafford, University of South Florida

Dr. Dan Stanislawski, University of Arizona

Dr. George H. Stankey, U.S. Forest Service

Dr. Frederick P. Stutz, San Diego State University

Dr. Gary Thompson, University of Oklanoma

Dr. Clifford E. Tiedemann, University of Illinois, Chicago

Mr. Gregory B. Tilley, Water Resources Administration, Maryland

Miss Toshi Toki, U.S. Census Bureau

Dr. Glenn T. Trewartha, University of Wisconsin, Madison

Dr. L. W. Trueblood, Leesburg, Virginia

Dr. Henry J. Warman, Worcester, Massachusetts

Dr. John C. Weaver, University of Wisconsin, Madison

Dr. J. Russell Whitaker, University of Tennessee, Nashville

Dr. Kathuryne Thomas Whittemore, Buffalo, New York

Dr. Tony Williams, Pennsylvania State University